

## Large landslide in the northwestern face of Mount Mitou, west Tokyo

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Rugged mountains consisting of inclined sedimentary rocks are present in the upper part of the Tama River, 70 km west of downtown Tokyo. It is generally assumed that these mountains are subjected to geologic and geomorphic conditions that are conducive to the occurrence of gravitational mass rock deformation and large landslides. Therefore, we clarified the geomorphic and geologic features of a large landslide on the northwestern face of Mount Mitou, which lies within this area. We found a thick angular gravel bed with a volume of approximately  $2 \times 10^6 \text{m}^3$ ; this layer contained jigsaw brecciated rock clasts, and hummocks were present on the ground surface. This gravel bed originated from a large landslide, the material for which was likely supplied from the amphitheater located 1 km south of the area where the gravel bed is primarily distributed. This gravel bed filled and dammed the small valley of a tributary of the Tama River, resulting in the production of a small lake or floodplain. The age of primary landsliding is estimated to be 1292-1399 cal AD or older, based on the <sup>14</sup>C ages of lacustrine-floodplain deposits, although younger ages in the range 1469-1794 cal AD are obtained from the gravel bed itself. This suggests that at least two independent landslides occurred at the study site. Interview with the local residents clarified traditional literature describing the break of a small lake and the apparition of a great serpent on the northwestern face of Mount Mitou; such features could be a metaphor for collapse of the landslide lake and the subsequent debris flow.