

Development of fluvial terraces and landslides since the late Pleistocene in the Shirata River basin, southeastern side of Amagi Volcano, Izu Peninsula, Japan

*Nao Tokumoto¹, Yoshihiko Kariya², Kuniyasu Mokudai³

1. Undegraduate, Senshu Univ., 2. Senshu Univ., 3. Japan Geoservice Inc.

This study clarified geomorphic features of debris flow-fluvial terraces and landslide complexes on the southeastern side of Amagi Volcano in Izu Peninsula, central Japan. Terrace forms can be classified into three: H, M, and L surfaces from descending altitude order. Among them, the M surface is common and its geology is unique. The M surface is composed of thick and poorly sorted angular gravel beds associated with debris flow processes. The L surface is an erosion surface of higher terraces. A longitudinal profile of the M surface seems to connect with large landslide bodies in the upper reach of stream on the volcano and to continue below the present seafloor off the mouth of such a stream. Some of large landslides show secondary movement of bodies and dissected headscarps. Furthermore, the M surface is covered by a tephra layer supplied from a nearby monogenetic volcano in 19 ka. These facts show that the M surface had been formed by debris flow events filling the stream in the late Pleistocene when the sea-level was lowered. Then an increase in precipitation in the area and a decrease in bedload supply into the stream, as well as sea level rise, would have caused down cutting of the floor of stream and created a terrace form of the M surface during the period from the latest Pleistocene to the early Holocene. Because of further down cutting, the L surface had been formed. Detailed description of the H surface is required in future.

Keywords: the last glacial period, fill terrace, erosional terrace, landslide, tephrochronology

