

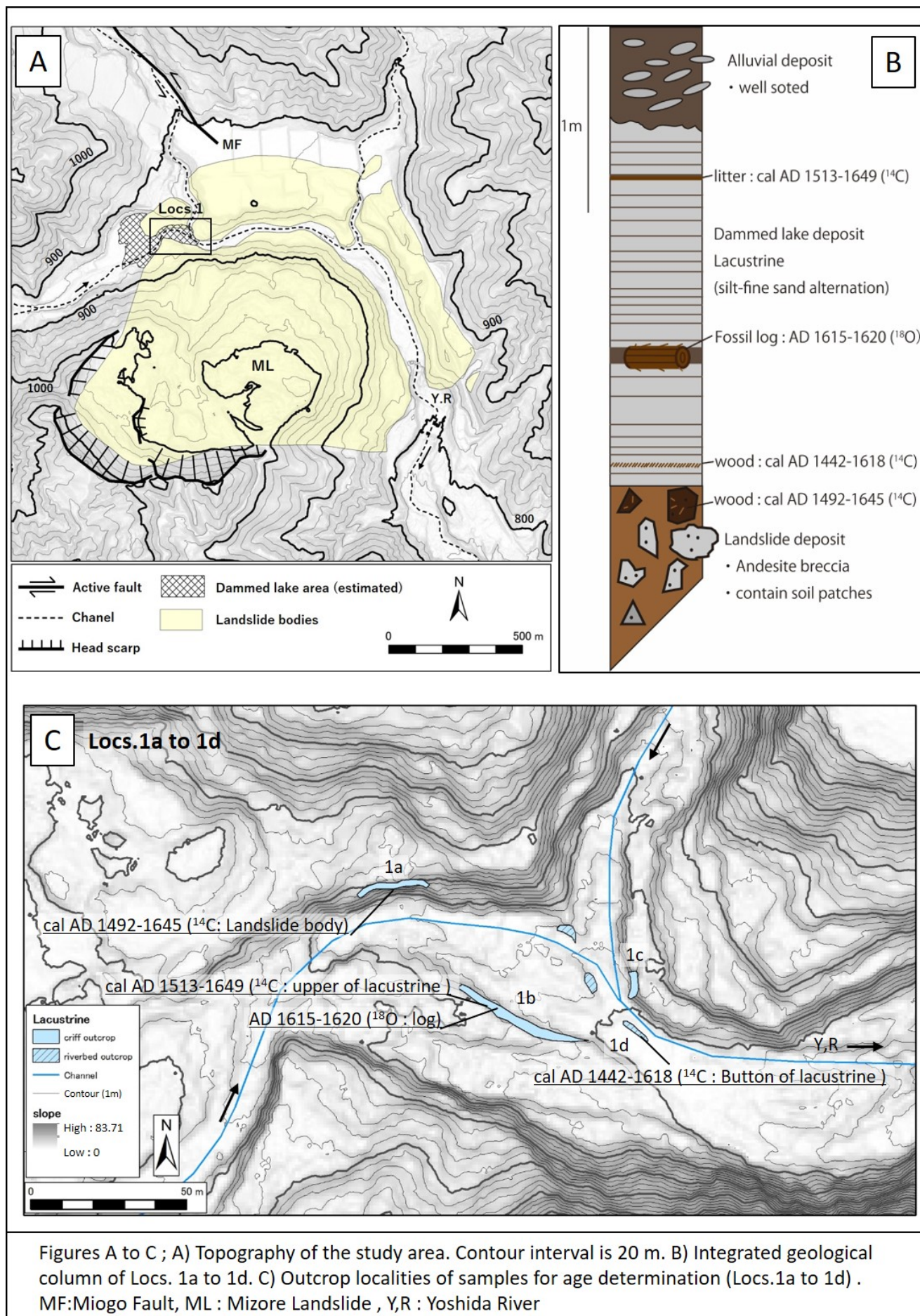
Geomorphological and geological details of the Mizore large-scale landslide and its causal link to AD1586 Tensho Earthquake in Gifu Prefecture, central Japan

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A large-scale landslide ($V=2.2 \times 10^7 \text{ m}^3$) called the " Mizore-no Oware(landslide) " is present around the southern tip of Shokawa-active fault zone. ML is believed to be caused by the AD1586 Tensho-earthquake (est. M 7 to 8) based on historical documents. However, a few researches regarding geological and geomorphological characteristics of ML have been carried out. Based on field investigation and geomorphological analysis by using GIS, we clarified the geological and geomorphological features of ML. The main conclusions are as follows.; a) The ML holds a set of three dissected head scarps and three landslide bodies both showing multiple landslide events. ; b) The ML shows unique geological and geomorphological features such as a jigsaw crack structure and "patchwork structure" in the landslide materials and hummocks/depression upon the ground surface of the landslide bodies; c) Materials of landslide body involve paleosol and fossil logs that enable us to date the landslide event; d) According to ^{14}C dates of logs in paleosol, the latest landslide event is likely occur cal AD1493-1645; e) Also, one wood log sampled from dammed-lake deposits indicated cal AD 1514 to 1618 by ^{14}C and AD1615 to 1620 by tree-ring ^{18}O methods; f)The latest landslide event should be triggered by AD1586 Tensho-earthquake (estimated M=7 to 8) generated from the Shokawa fault zone close to northern of ML.

Keywords: AD1586 Tensho-earthquake, Shokawa fault zone, Large-scale landslide, Dammed lake, Paleo-earthquake



Figures A to C ; A) Topography of the study area. Contour interval is 20 m. B) Integrated geological column of Locs. 1a to 1d. C) Outcrop localities of samples for age determination (Locs. 1a to 1d) . MF: Miogo Fault, ML : Mizore Landslide , Y.R : Yoshida River