# Evolution of Mustang Graven, Tibet Himalayas, due to eastward extrusion of Tibet Plateau in and after the Last Glacial Age

# Hiroshi Yagi[1], Hideaki Maemoku[2], Yasuhiro Kumahara[3], Takashi Nakata[4]

[1] Geogr., Yamagata Univ., [2] Geography, Edu., Hiroshima Univ., [3] JSPS Research Fellow, Dept. of Geography, Letters, Hiroshima Univ., [4] Dept. of Geogr., Hiroshima Univ.

This study clarifies neotectonics and evolution of Mustang Graven due to eastward extrusion of the Tibet plateau in and after the Last Glacial Age. Mustang Graven is a NS trend depression and is located in Tibet Himalayan zone just behind the Higher Nepal Himalayas. Its average height is 4000 meters. Its width and length are less than ten kilometers and more than fifty kilometers respectively. This study depends on interpretation of aerial photographs in scale of 1/50,000 over the Mustang Graven and field survey carried out in Sept. 2002.

A distinct topographic contrast occurs along a mount foot line between the graven and the surrounding mountains, the Tibet Himalayas of 5000-7000 meters asl. Fault scarplets on moraines and fan surfaces, which developed as outwash plains in and after the Last Glacial Age, are traceable along the western foot line. Deformation of the topographic surfaces are cumulative and five to ten meters in relative height . Sense of the faults is normal downthrowing to the east. Valley side fault in a normal sense is also found in the Thakkola formation, the Pleistocene sediment, near Dhakmar village. Deformation of the Thakkola Formation is more than fifty meters. Such phenomenon indicate that Mustang Graven has been formed by a tensile stress field of EW direction and evolved also in and after the Last Glacial Age. This implies the extrusion of the Tibet Plateau has been continuing throughout the late Pleistocene and to the Holocene.