

# Lithostratigraphy and geological structure of the Kamigoto district, Goto islands, Nagasaki prefecture

# Masaru Yasunaga[1]; Shoichi Kiyokawa[2]

[1] Earth and Planetary Sci., Kyushu Univ; [2] Earth & Planetary Sci., Kyushu Univ.

The Kamigoto district is situated in the northern part of the Goto islands, western extremity of the Japanese Islands. This area shows excellent exposure of Lower to early Middle Miocene sedimentary sequence (Goto Group). I did fieldwork in this area and examined lithostratigraphy and geological structure which may give significant tectonic data between eastern part of the Eurasia continent and Japanese Islands.

**Lithostratigraphy:** The Goto Group is divided into two formations; Aosaigaura and Inoseto Formations. The Inoseto Formation conformably overlies the Aosaigaura Formation. The total thickness of two formations reaches over than 2000m.

The Aosaigaura Formation, more than 500m thick, consists mainly of alternation of sandstone and mudstone. Cross-lamina and ripple marks are well developed in gray to dark brown sandstone. Mudstone and siltstone are black to dark gray color, and hard. In the lower part of the Formation, outer 10 meter thick white acid tuff bed interbedded in the thick sandstone.

The Inoseto Formation, 1500m thick or more, is mostly consists of sandstone. This formation is characterized by upward thickening, and is divided into 4 members on the basis of the extent of sandstone and mudstone alternation; A to D Member in ascending order. The sandstone is yellowish orange to light gray color. Well-developed cross bedding and convolute lamination are well presented in the upper portion of these beds. The Inoseto Formation often contains coarse-grained sandstone with rip-up clasts of mudstone. Characteristically, Sandy mudstone of the B Member yields fossil flora and the D Member contains coal-bearing sandstone. Paleocurrents from the foreset dip of cross-beddings in the Inoseto Formation show NE to NW direction.

**Geological Structure:** In general, the beddings are gently dipping to the north in this area. And there are three deformation structures. First, shallow plunges NE-SW trending folds. Second, NE-SW trending Normal fault(F1). And third, left lateral strike-slip fault(F2). The F1 are identified with steeply dipping beds, which contain highly deformed fabrics. This fault truncated the uppermost beds of the D member. It suggests that the deformations which formed the Normal fault are very young deformation which occurred at least late Miocene. F2 truncated previous deformations. In this study, we identified following points. First, The Goto Group deposited by the NE-SW direction. Second, identified two deformations are north to down normal fault and left lateral strike-slip fault.