

## Mylonitization of granites in the central part of the Wariyama Uplift Zone

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Recently, granites of Upper Carboniferous age(300Ma) have been reported in the South Kitakami belt. One is granites of the GSJ B326 borehole samples of Tomioka town, in the southeast of Fukushima Prefecture (Ohtomo et al. ,2008, Tsutsumi et al., 2010) , the other is from the Wariyama Uplift Zone in the south of Miyagi Prefecture (Takeda et al., 2012). Both are located in the eastern part of the Futaba shear zone. The granites of the Tomioka borehole are composed of fine-grained tonalite and medium-grained tonalite associated with aplite, which have distinct foliation characterized by the elongation of quartz and an alignment of mafic minerals.

Fujita et al. (1988) named granite distributing in the Wariyama Uplift Zone (Oide and Fujita,1975) the Wariyama sheared granodiorite, and pointed out that it is the marginal facies of the Marumori Granitic Complex and belong to younger Abukuma granite. However, Takeda et al.(2012) found that there are granites of Upper Carboniferous (around 300Ma) and Upper Cretaceous, and called them the Wariyama granite and the Takase granite, each other. We report the distribution and mylonitization of both granites in the district between the Takase Pass and the Kosai Pass.

In the central part of the Wariyama Uplift Zone, the Wariyama sheared granodiorite(Fujita et al., 1988)is lithologically divided into the Wariyama granite and the Takase granite (Takeda et al., 2012). The former is composed mainly of fine to medium-grained tonalite, and latter is composed mainly of medium to coarse-grained tonalite, which is characterized by including porphyritic biotite (0.5-1.0cm in diameter). Both granites affected by strongly deformation are characterized by distinct foliation defined by the elongation of quartz pool and an alignment of mafic minerals. It is not clarified the geologic relations and mylonitization of both granite.

In E-W section along the Takase Pass, the boundary of both granite is located in east 300-500m of the pass. The Wariyama granite in the western side is composed of massive to weakly deformed granite. Around the boundary, both granites show the strongly mylonitic foliation and weakly lineation. In this section, the wide of mylonite zone is about 300m.The mylonite zone elongate to SW direction until Mt.Omori. In the extension area of the south side, the direction of the mylonite zone changes southeast from the southwest in the vicinity of western margin fault. The distribution of mylonitized granite is subparallel to the boundary of the granites. It is suggested that the mylonite zone was produced around the boundary of the Wariyama and Takase granite when the former contact tectonically with the latter.

Keywords: Wariyama Uplift Zone, granite, mylonitization, South Kitakami Belt