

Revision of the stratigraphy of the earliest eruptive products in Southern Yatsugatake Volcanoes, central Japan.

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The Yatsugatake volcanoes can be subdivided into the southern and northern area, the Natsuzawa Pass being the border (Kawachi, 1977). Kawachi (1977) maintained that the activity of Yatsugatake volcanoes are divided into the Older and the Younger period separated by an erosional hiatus. However, Nishiki et al. (2007) determined periods of the volcanic activity of Yatsugatake area by means of K-Ar age determination and magnetostratigraphy, and concluded that the activity of Yatsugatake volcanoes started around 0.5 Ma. The earliest eruptive products of Southern Yatsugatake volcanoes have been named Kirreto andesite by Kawachi (1977). Kawachi (1977) suggested that these products were the central core of the volcanic body, but the intimate stratigraphy of Kirreto andesite is not clarified yet and so, the volcanic activity of Southern Yatsugatake volcanoes is not clarified yet. Therefore, the authors surveyed around the Nakadake and Jogo Gorge areas in Southern Yatsugatake, and we examine the intimate stratigraphy of Kirreto andesite in these areas.

Kirreto andesite in the study area are fine-grained two pyroxene basaltic andesite, and these are mostly welded pyroclastic rocks and agglutinate which have been suffered both alteration and weathering. These are considered to be proximal products of a volcanic crater. The Nakadake area where Kawachi (1977) suggested to be vent complex area, is mainly constructed by welded pyroclastic rocks and agglutinate. It is indicated that there was a central eruptive crater in Nakadake area, and the volume of lava flows increases toward north from Nakadake. Meanwhile, around Jogo Gorge area, there are alternating layers of pyroclastic rocks and lava flow and also agglutinate. So, it is suggested that there was another eruptive crater in Jogo Gorge area. Therefore, in the studied area, there existed several eruptive centers, which are lined up in the N-S direction.