

## The Middle Miocene tectonics and volcanism in the intra-arc and the back-arc region, Northeast Japan

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In northeast Japan, many submarine volcanic rocks related to opening of the Japan Sea in the Early Miocene are widely distributed. They are very important to consider the evolutionary process of Japan Arc and to elucidate the submarine volcanism. Despite the importance, there were no detailed sedimentological studies of these volcanic rocks, and the detailed sedimentary processes, sedimentary basin formation, paleo-volcanism and tectonics were poorly understood. In this study, we tried to reconstruct the detail volcanic edifices and volcanism based on the facies analysis of volcanics in typical two area; one is Ou Backbone Ranges in Nishiwaga town, Iwate prefecture and the other is Dewa Mountains in Sakata, Yamagata prefecture, that were located in the intra arc and the back arc in the Miocene respectively.

As results, we could elucidate paleo volcanism in each area. Remarkable tectonic change occurred in 15Ma with active volcanism, counterclockwise rotation and rapid subsidence (Hosoi et al., 2013). Regional paleostress around 15 to 12Ma is NW-SE tensional stress (Otsuki, 1989; Hosoi, 2013). This tectonic change happened in 15Ma with opening of Japan Sea, and active bimodal volcanism, rotation movement and tectonic subsidence occurred.

[References]

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