

Reconsideration of the Tanakura shear zone north extension in the Oisawa tectonic zone, Yamagata Prefecture

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In recent studies, it is thought that the northern extension of the Tanakura tectonic line receives flexure or the modification of the base in the Nagai Basin western margin fault zone and lies behind in the east of Asahi mountainous, after having gone along the Ringo area, Yamagata Prefecture. On the other hand, possibility to extend the Tanakura shear zone formed with the activity of the Tanakura tectonic line in the Oisawa tectonic zone of the Asahi mountainous eastern margin is suggested in some studies.

Therefore I investigated the Oisawa area for the purpose of the elucidation of the geological structure history to reconsider the Oisawa tectonic zone as northern extension of the Tanakura shear zone.

As a result of investigation, I elucidated that there are ten actual faults in this area and is able to estimate one fault. Also, according to the geological map which I made in this investigation, in perspective this geological feature has the tendency of the N-S direction and the fold axis develops in the NNE-SSW direction. The fold axis of NNW-SSE direction developing along the fault exist locally. In addition, the stratigraphy of the Oisawa area is different every block divided by faults, and the western block and an eastern and southern difference divided by Sagaegawa fault are particularly clear. Once more, I elucidated a shear sense of each faults and elucidated that Sagaegawa fault and Oisawa fault were affected by dip-slip and strike-slip inversion tectonics.

From those results, the basin of the Oisawa area had a characteristic same as the Yamatsuri Basin of a strike-slip basin formed in the southern part of Tanakura tectonic line when Oisawa area examined the possibility that it was a strike-slip basin. Therefore I judged Oisawa area to be more likely to be a strike-slip basin and made the tectonic development model of the Oisawa area based on a shear sense of each faults. When strike-slip inversion tectonics influences a basin of the Oisawa area like the model that I made, it is limited in 15-12Ma in a timing of strike-slip inversion tectonics in the Oisawa area, and Oisawa tectonic zone is more likely to be the north extension of the Tanakura shear zone.

Keywords: Oisawa tectonic zone, Tanakura shear zone, Tanakura tectonic line