

## Geologic structure of the Jurassic accretionary complexes in the Akka-Tanohata area, North Kitakami Belt, Northeast Japan

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There were only few age data available in estimating the accretion age of the accretionary complexes in the North Kitakami Belt, Northeast Japan, but recently age-diagnostic fossil data have increased little by little from the northern part of the belt, i.e., Yamagata-Akka-Iwaizumi-Tanohata area. Accretionary complexes in the Yamagata-Akka-Iwaizumi area comprise tectonostratigraphic units named as the Kisawahata, Magidai, Sawayamagawa, Akka, Takayashiki, Seki, Kassenba, Otori and Osakamoto Formations in tectonostratigraphic order. A series of the Kisawahata to Takayashiki Formation forms a large anticlinorium, which comprises the Shimotokusari Anticline, Fukada Syncline and Kuzugata Anticline. By contrast, the Seki, Kassenba, Otori and Osakamoto Formations constitute the western flank of the anticlinorium, and form a large syncline, the Hiraniwadake Syncline. We can note that accreted time can be estimated by the following fossil data: 1) Bajocian-Bathonian radiolarians from a manganese nodule in the mudstone of the Otori Formation (Suzuki et al., 2007b); 2) Kimmeridgian radiolarians from the mudstone of the Seki Formation (Nakae and Kamada, 2003); and 3) Oxfordian ammonoid from the sandstone of the Takayashiki Formation (Suzuki et al., 2007b). To the east of the Yamagata-Akka-Iwaizumi area, accretionary complexes in the Tanohata area are composed of the Magisawa and Koshimeguri Formations. Fossil data are known only about Callovian radiolarians from the mudstone of the Koshimeguri Formation (Matsuoka and Oji, 1990). Although the accreted ages of the Kisawahata, Magidai, Sawayamagawa and Akka Formations are unknown, the Shiriya Group in the Cape Shiriya correlative to the Akka Formation is considered to be accreted during or soon after the Tithonian.

The Magisawa-Koshimeguri Formation in the Tanohata area is lithological similar to the Seki to Osakamoto Formation in the Yamagata-Akka area. Both lithofacies have the common character that consists of thick layers of bedded chert and sandstone with mudstone. The Seki, Otori and Koshimeguri Formations contain a siliceous claystone-black claystone sequence, which is a characteristic lithofacies of the Permian-Triassic boundary sequence in the pelagic sections. The estimated accretion age of the Koshimeguri Formation occupies an intermediate position between those of Seki and Otori Formations, and their accretionary ages are approximately the same. Therefore, the Seki to Osakamoto Formation and Otori-Koshimeguri Formation are tectonostratigraphically correlatable units each other, and consequently they construct the both flanks of the anticlinorium mentioned above.