

Accretionary complex to the south of Hirosaki City

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Accretionary complex of unknown age occur as a window among the Neogene to the south of Hirosaki City, Aomori Prefecture, northern Japan. It was divided into the Mitsumenai, Nishimatayama, and Owazawa Formations in stratigraphically ascending order (Oide et al., 1989), and was regarded as northwestern extension of the Kuzumaki-Kamiashi Belt (western part of the Northern Kitakami Belt), based mainly on Permian and Triassic conodonts from chert reported by Toyohara et al. (1980). We report preliminary results on radiolarian fossils and modal composition of sandstone, in order to evaluate this accretionary complex in the regional geotectonic framework.

The studied areas are Owazawa River (Hirosaki City) and Mitsumenai River (Owani Town) routes. In both areas, the accretionary complex consists mainly of severely deformed mudstone accompanied by sandstone, siliceous mudstone, chert, and metavolcanic rocks. Limestone has not been observed. Scaly and/or slaty foliations generally strike north, gently dip, and are folded by at least two types of deformation (pre-Neogene recumbent and post-Neogene upright folds).

We recognized two types of sandstones (gray sandstone and greenish gray sandstone) in these areas. The gray sandstone, accompanied by black mudstone, occur in the eastern margin of the accretionary complex. The greenish gray sandstone with tuffaceous mudstone occur in the rest central to western areas. Both types of sandstone are rich in plagioclase particles and felsic volcanic rock fragments, and are classified as feldspathic to lithic arenite. The gray sandstone is richer in plagioclase and poorer in lithic particles. Both sandstones also contain small amounts of K-feldspar and granite fragments.

We extracted poorly preserved radiolarians from mudstone samples accompanied by greenish gray sandstone. They commonly contain multicyrtrids conferrable to the genus *Canoptum*, which suggests the Late Triassic to Early Jurassic ages. Radiolarians has not been found from mudstone with gray sandstone.

In the North Kitakami and Oshima belts, mudstones has been dated as middle to late Jurassic (to the earliest Cretaceous). The accretionary complex near the Hirosaki City is thus probably older than those in the Northern Kitakami Belt. The study area may occupy an inner-arc and older part of the Northern Kitakami Belt than the Kitakami Mountains.