

Geology and radiolarian ages of the Kamiaso unit in the Mino-Seki area, Gifu Prefecture, central Japan

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The Mino terrane, one of the disrupted terranes in southwest Japan, is divided into several tectonostratigraphic units on the basis of composition, fabric and age. However, there is a problem that these data are biased, because detailed studies have been conducted only in limited areas. The Mino-Seki area of the central part in Gifu Prefecture is one of such areas. According to Wakita (1988b), this area is occupied by the Kamiaso unit that is characterized by repeating coherent chert-clastic sequences.

As a result of a detailed field work, accretionary complexes in the Mino-Seki area are divided into an upper or coherent unit and lower or melange unit, based on differences in lithology and geological structure. The upper unit is characterized by a tectonic pile composed of chert-clastic sequences that retain the oceanic plate stratigraphy. Middle to Late Triassic radiolarians were obtained from chert. The lower unit includes conglomerate, melange and alternating beds of chert and limestone unlike the upper unit. There are also differences in lithology of the chert. Black chert with weathered red surface is widely distributed along the Nagara River. These lithofacies generally are not recognized the Kamiaso unit. Chert samples yield Middle Triassic to Early Jurassic radiolarians, while siliceous mudstone samples yield Middle Jurassic radiolarians. A chert sample in alternating beds of chert and limestone yields of Late Triassic radiolarian. Igo and Koike (1975) reported late Norian conodonts from a limestone sample in alternating beds of chert and limestone.

The lower unit may be correlated to a tectonostratigraphic unit other than the Kamiaso Unit on the basis of composition, fabric and radiolarian ages.

Keywords: Mino terrane, Kamiaso unit, Mino-Seki area, chert, siliceous mudstone, radiolaria