

Geochronology of the Yorii metamorphic rocks on the Kanto Mountains - Extension of the Abukuma metamorphic rocks to Southwest Japan.

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In the Pacific type orogen, non-metamorphic accretionary complexes (AC) and high P/T metamorphic rocks as deeper facies of AC, often exist in pairs, for example as the Shimanto belt and Sanbagawa belt. Jurassic AC is widely distributed in Japan arc. On Northeast Japan, part of the deep facies of the Jurassic AC are thought to be the Abukuma metamorphic belt (Hiroi, 1998). On Southwest Japan, the Oshima metamorphic rocks in the Shikoku region and the Higo metamorphic rocks in the Kyushu region are corresponding to the Abukuma belt, but it's not distributed widely (Takagi and Arai, 2003).

Tiny metamorphic rock masses are distributed in the low angle faults of the base of Atogura Nap in the Yorii area, the Kanto Mountains. These metamorphic rocks are called the Yorii metamorphic rocks (Takagi, 1991). The Yorii metamorphic rocks have been pointed out to be similar to the Abukuma metamorphic rocks on the basis of the Sr isotope initial values of the accompanying granites, but the sedimentary age and the metamorphic age of the original rocks have not been clarified.

In this study, the zircons U-Pb ages in pelitic gneisses of the Yorii metamorphic rocks were determined by LA-ICPMS. These ages are close to the zircon U-Pb ages and fossil ages of the Abukuma Belt, and it's indicates that the Yorii metamorphic rocks are probably an extension of the Abukuma Belt to Southwest Japan.

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Keywords: Yorii Metamorphic Rocks, Abukuma Metamorphic Belt, Zircon U-Pb age