

Tectonostratigraphy of the Omama Complex of the Ashio Belt in the Umeda area, Kiryu City, Gunma Prefecture

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The Jurassic accretionary complex widely distributed in the north of the Kanto Plain is called the Ashio Belt, regarded as the northeastern extension of the Tamba-Mino Belt. Since the mid-1990s, tectonostratigraphic studies have been conducted in the Kuzu area located in the southeastern part of the Ashio Belt (e.g., Kamata, 1996, 1997, 2000); however, the tectonostratigraphic architecture of accretionary complexes in other areas has been unclear. In the Umeda area, Kiryu City, Gunma Prefecture, a Jurassic accretionary complex comprises the Omama and Kurohone-Kiryu complexes (Kamata, 1996). We here describe lithology and geologic structure of the Omama Complex.

In the present study, the Omama Complex is subdivided into two tectonostratigraphic units, Unit A and Unit B. Unit A consists of sheared alternating sandstone and shale and a melange that includes slabs and clasts of chert and a minor amount of limestone and basalt with a muddy matrix. Shale contains probably Middle Jurassic radiolarians. Unit B is a melange containing large blocks of Permian chert and basaltic rocks.

According to Kamata (1997), the Kuzu Complex in the Kuzu area is subdivided into UNIT 1, 2, 3, in structural ascending order. UNIT 1 and 3 are characterized by the tectonic repetition of Triassic chert and Middle to early Late Jurassic clastic sequence, and UNIT 2 is composed of a melange with huge blocks of Permian limestone and basaltic rocks. Based on the lithological characteristics and geologic age, Unit A and B of the Omama Complex can be correlated with UNIT 1 and UNIT 2 of the Kuzu Complex, respectively. In addition, the Middle to early Late Jurassic Kuromatagawa Complex in Niigata Prefecture, composed mainly of coherent sequences of alternating sandstone and shale and slabs of basaltic rocks and chert (Hara and Kashiwagi, 2004), can be correlated with the Omama Complex. Considering the lithology, geologic structure, and age of accretion, Middle to early Late Jurassic accretionary complexes (Kuzu, Omama, Kuromatagawa complexes) occur several times throughout the Ashio Belt with large-scale synclines and anticlines.

Keywords: Ashio Belt, Omama Complex, Jurassic Accretionary Complex