

The Permian / Triassic boundary sequence in the Otori Formation of the Northern Kitakami Belt

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The mass extinction around the Permian/Triassic(P/T)boundary is known as one of the most severe event in the earth's history. This event in deep-sea environment is recognized in a sequence of Late Permian to Early Triassic pelagic sedimentary rocks in Jurassic accretionary complexes in Japan, which consists of Upper Permian chert, uppermost Permian siliceous claystone, lowermost Triassic black claystone and Lower Triassic siliceous claystone. The P/T boundary is considered to be placed at the base of the black claystone (e.g. Yamakita,1987 ; Ishiga & Yamakita,1993; Isozaki,1994 ; Yamakita et al., 1999).

A similar sequence was first found in the North Kitakami Belt, as well as Tamba-Mino-Ashio and Northern Chichibu belts, at six localities in the Otori Formation (Sugimoto, 1974) which consists of chert, siliceous claystone and mudstone, in the northwest Iwaizumi Town, Iwate Prefecture.

The best section among them comprises a 25 m-thick continuous sequence of white bedded chert, grey siliceous claystone, black claystone, and grey siliceous claystone in ascending order. In this section, age-diagnostic conodonts, *Hindeodus* cf. *parvus* and *Neospathodus waageni*, were recovered from the black claystone and the lowermost part of the overlying siliceous claystone, respectively, and they are dated as early Induan and Olenekian (Early Triassic). A wide platform-bearing Neogondolellid conodonts and probable albaillellid radiolarians were also obtained from the white bedded chert, suggesting Permian age.

These preliminary results suggest that this section is one of the most complete pelagic sequences across the P/T boundary, in comparison with the other sections reported from Japan. More geochemical, paleontological and sedimentological studies in this section would provide more information on deep-sea environments across the P/T boundary.