

Paleogeography of two different units of the Sanchu Cretaceous System in the Kanto Mountains, central Japan

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The Sanchu Cretaceous System is widely distributed along the axial part of the Chichibu Belt in the Kanto Mountains and is traditionally called the Sanchu Graben. The Sanchu Cretaceous System, which is assigned to the Kurosegawa Belt, consists of the Hauterivian Shiroi, Barremian to early Aptian ? Ishido, Aptian to Albian Sanyama, Barremian ? to early Aptian Tozawa and early Albian Ohnita Formations in the Jikkoku Pass area. They can be classified into two different units, based on their lithology, stratigraphy and bivalve faunas. One is the Shiroi, Ishido and Sanyama Formations, and the other is the Tozawa and Ohnita Formations.

The Shiroi, Ishido and Sanyama Formations yield the Northern-tethyan fauna, and are correlated with the Monobegawa Group which is distributed in the Northern Chichibu Belt of Shikoku. The lithology and bivalve fauna of the Ishido Formation, however, are somewhat different from those of the Monobegawa Group with regard to the occurrence of some coralline limestone blocks and a few elements of the Tethyan fauna. Taking account into these lines of evidence, the Shiroi, Ishido and Sanyama Formations have been deposited in the same and/or relatively lower latitude compared with the Monobegawa Group. Their depositional sites might be existed around about latitude 30 degrees north and/or lower, based on the distribution of shallow-water carbonate platforms in Tethys during Barremian to Aptian.

On the other hand, the Tozawa and Ohnita Formations yield the Tethyan fauna, and correspond to the Nankai and Nakakyushu Groups in Shikoku and Kyushu. Their lithology, stratigraphy and bivalve faunas show particularly the close resemblance to those of the Nakakyushu Group. The Tozawa and Ohnita Formations, therefore, have been deposited in the same depositional site as the Nakakyushu Group. They might be also deposited in a lower latitude 30 degrees north on the basis of the distribution of rudist, which is a character of the Tethyan fauna. In addition, it is presumed that they were deposited in comparatively lower latitude than the Shiroi, Ishido and Sanyama Formations, judging from the occurrence of the Tethyan fauna.

This interpretation of their depositional sites supports the left-lateral movement of the Kurosegawa Belt during Early Cretaceous, which was proposed by Tashiro (1985) in Shikoku. The transcurrent distance is considered to have attained to several hundreds kilometers, which is deduced from the juxtaposition of two different units of Lower Cretaceous System from Kyushu to Kanto Mountains.