

The faunal change of Early Permian albaillellarians in the Sasayama section, the Tamba Terrane

Mikiko Shimakawa[1]

[1] Dept. Geosci., Fac. Sci., Osaka City Univ.

Permian radiolarians are divided into three groups; albaillellarians, spherical radiolarians, latentifistularians. Albaillellarians are useful for the age determination of the Permian. However, there are only a few paleontological studies of radiolarians in the Lower-Middle Permian.

The rock samples for radiolarian research were collected from 241 horizons of bedded chert section (the Sasayama section) of the Tamba Terrane. This section was studied by Ishiga & Imoto (1980) and Ishiga et al. (1982). They defined five radiolarian assemblage zones, namely the *Pseudoalbaillella u-forma- Pseudoalbaillella elegans* Zone, the *Pseudoalbaillella lomentaria* Zone, the *Pseudoalbaillella rhombothoracata* Zone and the *Follicucullus scholasticus* Zone in ascending order.

In this study, the rock samples every five horizons which are corresponded to three Lower Permian radiolarian zones from the *Pseudoalbaillella u-forma- Pseudoalbaillella elegans* Zone to the *Pseudoalbaillella rhombothoracata* Zone were examined. Each individual number of abaillellaria, spherical radiolaria and latentifistularia was counted under a transmitted light microscope in 10x magnification. Albaillellarians were identified and counted at a specific level.

Spherical radiolarians account for 90% of the total radiolarian specimens in most sample horizons. None of the species of spherical radiolarians were identified, because those specimens were not well preserved. The mean percentage of Albaillellaria and Latentifistularia are about 5% and 2%, respectively. A total 10 species of Albaillellaria were recognized and counted: *Pseudoalbaillella* (7 species) and *Albaillella* (3 species). In this section, the dominated species is *P. sakmarensis*, and the second species is *P. scalprata*. The frequency of *P. scalprata* has one peak (acme) in this section, though the frequency of *P. sakmarensis* has two peaks. *P. scalprata* increase and reach at the maximum during the interval between 2 peaks of *P. sakmarensis*.

These results are correlatable with the radiolarian faunal change from the Migong section in the Qinzhou area, South China except dominant species. The dominated species is *P. scalprata*, and the second species is *P. sakmarensis* in the Migong section. Percentage of spherical radiolaria exceeds 90% of total radiolarian specimens. *P. scalprata* increase and reach at the maximum during the interval between 2 peaks of *P. sakmarensis*. It may be indicated that the paleoenvironment where *Pseudoalbaillella* live was similar in both sections. In Early Permian, the bedded cherts of the Sasayama section and the Migong section were formed in the pelagic part of the Panthalassa and the Qinfang Trough between the Yangzi Block and the Cathaysia Block, respectively. It is suggested that water mass moved between the Panthalassa and the Qinfang Trough. It is considered that the similar faunal change between the Sasayama section and the Migong section reflected the same paleoenvironmental change during Early Permian time.