

Ocean Plate Stratigraphy and accretionary process of the Yarlung-Tsangpo suture zone based on radiolarian biostratigraphy of mélanges near Najiu, southern Tibet

*XIN LI¹, Matsuoka Atsushi², Yalin Li³

1. State Key Laboratory of Palaeobiology and Stratigraphy, Nanjing Institute of Geology and Palaeontology, Chinese Academy of Sciences, 2. Department of Geology, Faculty of Science, Niigata University, 3. China University of Geosciences, Beijing

The southernmost Yarlung–Tsangpo suture zone (YTSZ) in the Tibet plateau is widely accepted as the youngest suture zone that separates the Indian continent to the south and the Lhasa terrane to the north. The study area is located in the southern belt of the YTSZ. This area includes incomplete and mostly peridotitic massifs and Jurassic–Cretaceous mélanges of marine sediments. The volcanic-sedimentary strata near Najiu County are located to the south of Yarlung–Tsangpo River. On the basis of various combinations of matrices and blocks and the tectonic contacts between them, the mélanges are divided regionally into two types, the Erba mélange and the Maquanhe mélange. Radiolarian assemblages of the *Trillus elkhornensis* (JR2) zone (Pliensbachian), the *Kilinora spiralis* (JR6) zone (Oxfordian), the *Hsuum maxwelli* (JR7) zone (Kimmeridgian), the *Loopus primitivus* (JR8) zone (lower Tithonian), *Pseudodictyomitra carpatica* (KR1) Zone (latest Tithonian to earliest Valanginian), the *Cecrops septemporatus* (KR2) Zone (Valanginian), the *Turbocapsula costata* (KR4) (Aptian) and the *Spoletensis* zone (KR5) (Albian) were yielded from siliceous rocks in the mélanges. Accretionary complexes usually grow from the continental side to the ocean side because of the oceanward migration of subduction sites. A significant temporal gap exists between the accretion of the Erba mélange and the Maquanhe mélange. The age of siliceous mudstone becomes younger southward. The arrangement of the mélanges shows the oceanward (southward) migration of the accretion. It seems that the Erba mélange and the Maquanhe mélange consist of successively and systematically southward-accreted materials scraped off from the subducted oceanic plate.

Keywords: Ocean Plate Stratigraphy, accretionary process, radiolarian, Yarlung-Tsangpo suture zone