## Radiolarian-based study on the fabric and the formation process of the Early Cretaceous mélange near Zhongba, Yarlung–Tsangpo suture zone, southern Tibet

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The Yarlung–Tsangbo Suture Zone (YTSZ), as the southernmost and the youngest amongst the sutures which subdivide the Tibetan Plateau into several east–west trending blocks, marks where the Neo-tethys was consumed as the Indian continent approached northward and collided with the Eurasian continent. Mélanges in the YTSZ represent the oceanic remnants from the oceanic plate through subduction and collision. Mélanges are characterized by highly sheared volcanoclastic or siliceous mudstone matrix including blocks of chert, claystone, and basalt. Detailed radiolarian analyses are conducted on the mé lange near Zhongba County. Macroscopic, mesoscopic, and microscopic observations are combined to elucidate the relationships of age, lithology, and structure. The results highlight the fabric of brecciated chert in mesoscopic scale, which is thought to be due to localized overpressuring. Oceanic plate stratigraphy from the Early Jurassic to Early Cretaceous has been reconstructed based on radiolarian age assignment. The process of mélange formation is proposed for the sediments with different consolidation extent during progressive deformation of accreted sediments at shallow levels during subduction.

Keywords: mélange, ocean plate stratigraphy, breccia, radiolarian assemblage, SEM observation