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Ordovician acritarch studies in China

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Since 1980s, great progress has been made on Chinese Ordovician acritarch research, and play more and more important role in global acritarch studies.

The Ordovician acritarchs have been reported from three Chinese palaeoplates: South China, North China and Tarim. Most specialists focused on the Ordovician acritarch assemblages from South China. Nearly one hundred papers have been published to discuss taxonomy, biostratigraphy, palaeogeography and palaeoenvironmental implications of Ordovician acritarch from South China. Only six papers recorded Ordovician acritarch assemblage from North China. Most of them discussed acritarch stratigraphic implications on Cambro-Ordovician boundary. Nearly 20 papers recorded the Middle-Upper Ordovician acritarch assemblages from Tarim. Specialists discussed the acritarch biostratigraphic and palaeoenvironmental implications and the origination of cryptospore and land plants in their papers.

As three GSSPs and an auxiliary GSSP have been established in China, biostratigraphic study on Chinese acritarch play an important role in global stratigraphic correlations. Based on the acritarch assemblages from South China, some biostratigraphically significant acritarch taxa are recognized. FADs of *Aureotesta*, *Striatotheca* and the *Veryhachium lairdii* - *V. trispinosum* groups can be used to recognize the base of the Floian in South China and FADs of *Barakella* and *Liliosphaeridium* can indicate the base of the Dapingian. Most of these acritarch taxa have biostratigraphic potential to correlate within pre-Gondwana and some of them even can be correlated globally.

The GOBE was the most important increase of marine biodiversity in Earth's history. In South China, the acritarch diversity greatly improved during the Early Ordovician and reached its highest peak in the *suecicus* graptolite biozone. The study from the six sections in South China implied that the acritarch diversity changes would be related to local environment and sea-level changes. An inshore-offshore transect of acritarch assemblages can be observed in Yangtze Platform, South China during the interval of the *deflexus* to *suecicus* graptolite biozone.

Based on the materials from South China, acritarch taxa *Ampullula*, *Rhopaliophora*, *Dactylofusa velifera* have been revised and their biostratigraphical, palaeogeographical and palaeoenvironmental implication have been discussed.

The Ordovician acritarch studies in China have gotten great progress, but are still far from being complete. More investigations on Ordovician acritarch assemblages in China are needed to solve the related scientific problems.

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