

## A biostratigraphic study of Ordovician and Silurian acritarch

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Acritarchs are organic walled microfossils which cannot have been classified into any groups (Evitt, 1963). Although most of them are probable resting cells of primitive eukaryotic algae, some might be plant spores or part of zooplankton. The classification of acritarchs is based completely on morphological criteria. Therefore, the morphological method has a possibility to miss out the essential morphological character to define a species. In the present study, acritarchs are classified based on the morphological features of their processes.

A new classification was applied to acritarchs which are found from Ordovician and Silurian shales. The result demonstrates that the morphology of the processes can be divided into eight groups without exception, suggesting that our criterion is effective to advance biostratigraphy of acritarchs.

It is also clarified that the morphology of process from Ordovician samples can be clearly discriminated from those from Silurian samples. This indicates that acritarchs have a possibility to be index fossils.