

## Graptolite nature of the Ordovician microfossil *Xenotheka*

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Light microscopic, SEM and TEM investigations show that the periderm of the problematic Ordovician organic microfossil *Xenotheka klinostoma* Eisenack, 1937 is built of five layers: inner lining, endocortex, fusellum, ectocortex and outer lining. The outer lining is made of a previously unknown material named here verrucose fabric. The outer lining was presumably an adaptation which aided survival through periods of unfavourable conditions. The general morphology of the test as well as of the fusellar structure of the wall indicate that *Xenotheka* is an aberrant camaroid graptolite. This finding thus extends the upper stratigraphic limit of the order Camaroidea from the early Arenig to Llandeilo.

**Key words:** Graptolites, Camaroidea, organic microfossils, ultrastructure, Ordovician, Poland.

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