

Halkieriid-like animals in the Late Ordovician?

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Abstract. The recent description of the Tremadocian halkieriid-like stem aculiferan, *Calvapilosa kroegeri*, could shed new light on some enigmatic Ordovician fossils known only by their disarticulated plates. Specifically, *Conchopeltis alternata* could be interpreted as a plate of sclerite-bearing stem aculiferan. Comparison is based on a similarity of conchs and reinterpretation of *Conchopeltis* tentacles as sclerites. This is a highly speculative idea, nevertheless, I think it may have some merit and ignite a discussion, but a reevaluation of *Conchopeltis* and some shelly taxa, like *Scenella*, is required.

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Calvapilosa kroegeri is a halkieriid-like animal described from the Tremadocian of Fezouata biota and interpreted as a stem aculiferan by its describeres (Vinther *et al.* 2017). The animal bears one anterior, subquadratic plate. The morphology of this plate is reminiscent of the specimen illustrated by Dzik (1999, Fig. 1) from the Chasmopskalk-type erratic boulder of the Caradoc age. Dzik (1991) described the specimen as a *Conchopeltis*-like, and transitional between the shells of *Conchopeltis* and *Scenella*, the former sometimes interpreted in the literature as a hydrozoan. Dzik (1991) affiliated with the specimen a minute plate from another Caradoc erratic boulder and suggested it might actually be an anal plate of a chiton.

Conchopeltis alternata Walcott is an enigmatic taxon known only by a handful of specimens from the Upper Ordovician of the Trenton Group. It is characterized by its unique symmetry, tetradial at first glance, but actually bilateral as shown by Oliver (1984). It was hypothesised by Knight (1937) to be a member of Conulariida, and later by Oliver (1984) more conservatively as an unspecified cnidarian. Importantly, Olivier (1984, Pl. 1, Fig. 1, 2) illustrated a specimen with purported tentacles.

If the specimen illustrated by Dzik (1991: fig. 1) can be uphold as related to both *Calvopilosa* and *Conchopeltis*, then the purported tentacles of the specimen illustrated by Olivier (1984, Pl. 1, Fig 1, 2) might be better interpreted as sclerites. It would be of interest to revise in the future *Conchopeltis*, *Scenella*, and some other shelly fossils, in the light of a possibility they might belong to sclerite-bearing aculiferans.

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