

Unsuccessful predation on Middle Paleozoic plankton: Shell injury and anomalies in Devonian dacryoconarid tentaculites

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Anomalous development of shell ornamentation and repaired shell injury in the Early Devonian dacryoconarid tentaculites are documented and interpreted as either a repaired injury of the shell (evidence of unsuccessful predation obscured by recrystallization), or as a result of an anomalous function of the mantle, caused by injury of the soft body. The manner of shell repair, which resembles the way that some modern marine animals, such as mollusks, repair their shells, is discussed. The issue of phylogenetic affinities of tentaculites has been also outlined. These findings represent the first documentation of unsuccessful predation on the Middle Paleozoic plankton.

Key words: Tentaculitoidea, predation, shell repair, Devonian

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