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ABSTRACT

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Ordovician conulariid monospecific assemblages (Czech Republic, Morocco)

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A recently discovered locality of the Katian age near Erfoud (Morocco) supports an assumption that at least some conulariids lived preferably in monospecific associations. Thousands of skeletons belonging to *Archaeoconularia consobrina* (Barrande, 1867) were documented in an extensive accumulation within a 20 cm thick calcareous sandstone bed containing also rounded intraclasts of fine-grained sediments. The specimens are well exposed on the top surface of the bed due to weathering. The specimens have the same prevailing orientation throughout the entire bed. The preservation and distribution patterns of these conulariids suggest a parautochthonous origin of the accumulation that was likely deposited after a single, high water-energy event, such as a storm or turbidite flow.

The same taphonomic situation was recently described for *Anaconularia anomala* (Barrande, 1867) from a Sandbian site in the Czech Republic and for *Archaeoconularia* cf. *consobrina* (Barrande, 1867) in a different Sandbian site in Bohemia, Czech Republic. Thus, the monospecific conulariid assemblages with abundant specimens seem not to be exceptional. Such mass occurrences of conulariids are similar in (1) alignment of specimens along the prevailing current direction, (2) limited content of other faunal elements, and (3) the presence of intraclasts and the sandstone matrix. These taxa are interpreted as originally inhabiting an off-shore environment below the storm wave base, with erected skeletons firmly attached to the sandy bottom at some calm places, or more probably deeply anchored in sand with the apical part (similar mode of life has recently been shown in fan mussels, which are often accompanied by algae forming sea meadows). During a single catastrophic event, conulariid skeletons were first broken off. This resulted in prevalence of the rounded schott ending in the apical region of the specimens. The apertural endings, including lappets, were destroyed during rapid transport prior to final deposition as aligned monospecific mass accumulations.

It is worth noting that some localities, especially those in Morocco, yielded mass accumulations, with tests densely covered by diverse epibionts like brachiopods and edrioasteroids, while others are typified by undisturbed skeletons without attached epizoans or traces of attachment scars. All these taphonomic and palaeoecological aspects, as well as association with mass occurrences of algae, are subject to further study.



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