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Systematic revision and phylogenetic assessment of the foraminiferal family Globivalvulinidae

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We present a systematic and phylogenetic revision of the Carboniferous–Permian subfamilies usually included within the family Globivalvulinidae (superfamily Biseriamminoidea), based for the first time on the interrelation between a morphological/structural approach (traditionally used for this fossil group) and a cladistic analysis (rarely applied to Palaeozoic Foraminifera). The systematic review of the globivalvulinid genera defines a new composition of the already existing four subfamilies of Globivalvulinidae (Globivalvulininae, Paraglobivalvulininae, Dagmaritinae, and Paradagmaritinae). The phylogenetic analysis of the Globivalvulinidae is aimed at understanding and reconstructing the relationships between its four subfamilies. The resulting phylogenetic tree is obtained by means of fifteen qualitative and one quantitative characters. The analysis shows that the Globivalvulinidae represents a monophyletic clade having the subfamily Globivalvulininae as the first taxon to branch out. The close affinity between the Dagmaritinae and Paradagmaritinae is confirmed.

Key words: Foraminifera, Biseriamminoidea, Globivalvulinidae, cladistics, phylogeny, taxonomy, Palaeozoic.

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