

Early Silurian Foraminifera from Gondwana – an early origin of the multichambered globothalamids?

Michael Kaminski

KFUPM, College of Petroleum & Geosciences, Geosciences, Dhahran, Saudi Arabia (kaminski@kfupm.edu.sa)

Early Silurian foraminifera until now have been regarded to consist of simple single-chambered monothalamids and two-chambered tubothalamids with an agglutinated wall. Although pseudo-multichambered agglutinated foraminifera first appeared in the mid-Ordovician (Kaminski et al. 2009), the origin of true multichambered forms was not believed to have taken place until the early or middle Devonian at the earliest (Holcová, 2002).

New discoveries from the Lower Silurian Qusaiba Shale Member in Saudi Arabia point to an earlier origin of the multichambered globothalamid Foraminifera than the currently accepted estimate of 350 Ma (Pawlowski et al. 2003). The agglutinated foraminiferal genera *Ammobaculites* and *Sculptobaculites* have been recovered from dark graptolite-bearing claystones of Telychian age, from the transitional facies between the Qusaiba and Sharawa Members of the Qasim Formation at the type locality near Qusaiba town, Saudi Arabia. The multichambered lituolids occur as rare components in a foraminiferal assemblage consisting mostly of monothalamids. This new finding revises our understanding of the early evolution of the multichambered globothalamid foraminifera. The fossil record now shows that the globothalamids were already present in Gondwana by 435 m.y.

Holcová, K. 2002. Silurian and Devonian foraminifers and other acid-resistant microfossils from the Barandian area. *Acta Musei Nationalis Pragae, Series B, Historia Naturalis*, 58 (3-4), 83-140.

Kaminski, M.A., Henderson, A.S., Cetean, C.G. & Waskowska-Oliwa, A. 2009. A new family of agglutinated foraminifera: the *Ammolagenidae* n.fam., and the evolution of multichambered tests. *Micropaleontology*, 55 (5), 487-494.

Pawlowski, J., Holzmann, M., Berney, C., Fahrni, J.F., Gooday, A.J., Cedhagen, T., Habura, A., & Bowser, S.S. 2003. The evolution of early Foraminifera. *Proceedings of the National Academy of Sciences*, 100 (20), 11494-11498