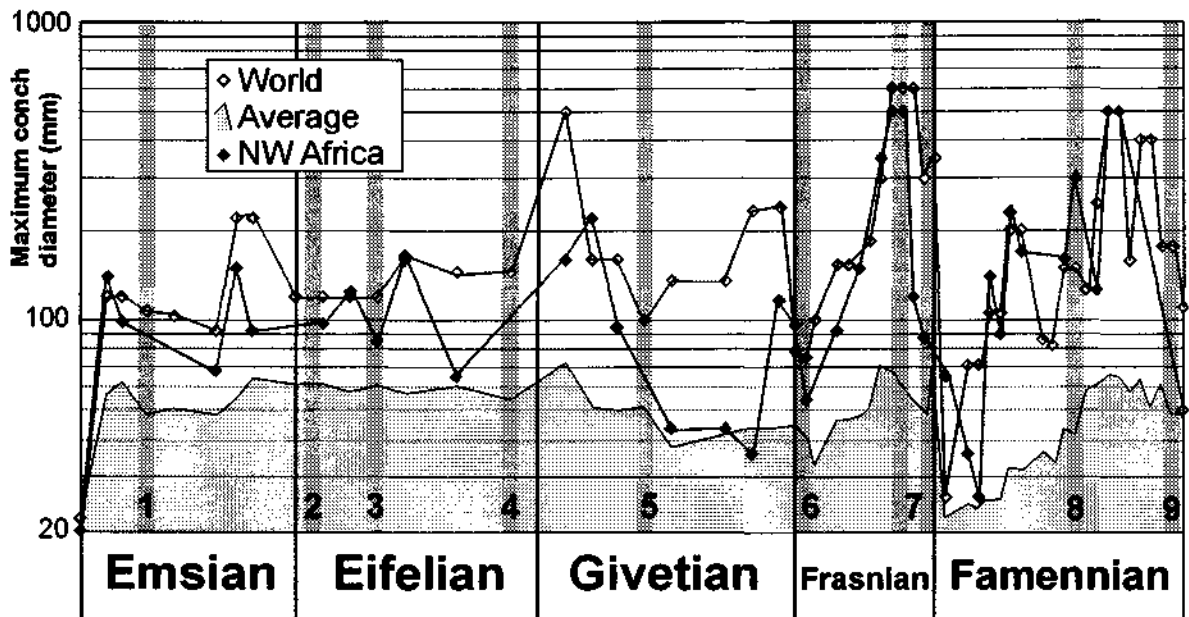


DEVONIAN AMMONOID BIOMETRY AND GLOBAL EVENTS - PRELIMINARY RESULTS

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Devonian ammonoids from Morocco attract attention because of various reasons. One is the impressive size of some specimens, especially of Late Devonian species (e. g. of the genera *Manticoceras*, *Carinoceras*, *Gonio-clymenia*, etc.) which attain conch diameters of more than 50 centimetres. Data of more than 1000 Devonian ammonoid species which are sufficiently treated in palaeontological literature were assembled. The maximum values of the diameters of these species were measured, extracted from various literature and from the database GONIAT (KULLMANN & KORN 1996).



Minima and maxima in ammonoid conch size of the three graphs (representing the world average, world maximum and NW Africa maximum through the Devonian) strikingly correlate with each other. The minima largely coincide with major global transgressive events (1-Daleje, 2-Chotec, 4-Kacák, 5-Taghanic, 6-Frasne, 7-Kellwasser, and 9-Hangenberg Event Levels). Maxima are present at the positions of the Upper Kellwasser Level (7) and of the *Annulata* Black Shales (8). An additional Event level can be recognised in the course of the graphs (3). It was described by JOHNSON et al. (1985) as transgression Id and happened in the *costatus* Zone (Eifelian). In the eastern Anti-Atlas (Morocco) it correlates with hiatuses/ facies changes in several localities and with the simultaneous appearance (pers. comm. M. KAZMIERCZAK, Tübingen) of various conodont and ammonoid species (e. g. *Subanarcestes macrocephalus*).

Global eustatic and climatic changes during the Devonian obviously influenced the growth of ammonoids, but the precise effect of facies changes on the size of the ammonoids is still unclear.

JOHNSON, J. G., KLAPPER, G. & SANDBERG, C. A. 1985. Devonian eustatic fluctuations in Euramerica. *Geol. Soc. Am. Bull.*, **96**, 567-587. Boulder.

KULLMANN, J., & KORN, D. 1996. GONIAT, Version 2.60 (13,5 MB). Universität Tübingen.