

LOWER DEVONIAN STROMATOPOROIDS IN THE SIERRA MORENA (SOUTHERN SPAIN)

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With regard to the evolution of stromatoporoids the Lower Devonian is one of the least well-known periods. In this period, between the Silurian reefs and the huge Givetian-Frasnian reefs, stromatoporoids and reefs are rather scarce. Consequently regarding Lower Devonian stromatoporoids we have two important questions:

1. Why did the Lower Devonian stromatoporoids build only very few reefs?
2. Where did the stromatoporoids of the Eastern Americas Realm reside during the Pragian stage? Stock (1994, p. 26) assumed that the Eastern Americas stromatoporoids survived in an unknown refuge in Bohemia, France, or Spain.

A detailed investigation of the Lower Devonian stromatoporoids of Bohemia by May (1999, 2002) proved, that the Prague basin could not have been the refuge postulated. On the other hand, the Sierra Morena in Southern Spain was known to contain Lower Devonian reef limestones. These stromatoporoids of the Sierra Morena however have never been investigated.

Consequently, Prof. Dr. Sergio Rodríguez (Madrid) and the author started a research project on Lower Devonian stromatoporoids of the Sierra Morena. The following represents the preliminary results.

Up to now the stromatoporoid fauna of two locations „Peñón Cortado” and „Guadámez II” in the Peñón Cortado Limestone have been investigated. It is assumed that the Peñón Cortado Limestone is of Upper Emsian age.

At location „Guadámez II” there occur *Actinostroma compactum* Ripper 1933, *Schistodictyon* n. sp. aff. *amygdaloides* (Lecompte 1951), *Clathrocoilona* (*Clathrocoilona*) sp., *Stromatopora polaris* (Stearn 1983), *Pseudotrurpetostroma* n. sp., and *Parallelostroma sinense* Yang & Dong 1979. At „Peñón Cortado” I found only *Plectostroma salairicum* (Yavorsky 1930) and *Syringostromella zintchenkovi* (Khalfina 1960). Both fauna strongly suggest an Emsian age for the limestone.

Remarkable is the lack of branched stromatoporoids and the scarcity of encrusting stromatoporoids. It is thought that these circumstances contributed to the scarcity of reefs.

Biogeography: *Actinostroma compactum* has up to now only been found in Australia and *Parallelostroma sinense* only in China. The stromatoporoids collected hitherto in the Sierra Morena bear a strong relationship to the Emsian fauna of Victoria (Australia) and Arctic Canada, but no relation to the Eastern Americas Realm. However, further investigations are needed to confirm these results.

References

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