

Palaeobiogeographic affinities of the reef faunas from the earliest Pragian in the Cantabrian Zone (NW Spain)

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Devonian reef faunas in the Cantabrian Zone are well known through several works done by the Research Group on Devonian Reefs from Oviedo University. This Group has established up to seven Devonian reef episodes of different magnitude and some of them were widely studied (Méndez-Bedia *et al.*, 1994, Fernández *et al.*, 1997, among others). The first episode was developed during the earliest Pragian and is recorded in some thin-bedded biostromal limestones with a rich fauna of corals and stromatoporoids. This interval has been studied within the context of the project CGL2005-03715/BTE and the results are currently in press. The aim of this work is to display the palaeobiogeographical affinities shown by the corals and stromatoporoids occurring in this first reef episode.

Late Lochkovian and early Pragian rocks crop out patchily in the Cantabrian Zone and only four sections are suitable for their study: Santa María del Mar, Arauz, Lebanza and Vañes sections. The Santa María del Mar section is located in the northern slope of the Cantabrian Mountains (Asturias province) and belongs to the Nieva Formation. The Arauz, Lebanza and Vañes sections lie in the southern slope of the Cantabrian Mountains, in the Palencia province, and correspond to the Lebanza Formation, which is laterally equivalent to the Nieva Formation

In these four sections, the stratigraphic succession consists mainly of storm-dominated ramp deposits comprising bioclastic lime grainstone packages and beds alternating with fossiliferous marlstones. Reef facies are usually recorded some metres above the Lochkovian/Pragian boundary. They are made by two kinds of biostromal units, which are up to 1.5 m thick:

- 1) biostromes of branching corals and
- 2) biostromes composed of massive tabulate corals and stromatoporoids.

Fasciculate rugose corals are the main builders of the branching-coral biostromes. The most common taxon is *Disphyllum* sp. which is the only one present in the four sections. This species shows a fairly fast increase in number and corallite size. Subordinate rugose corals are *Embolophyllum* sp. and *Tryplasma aequabile* LONSDALE.

Several tabulate coral genera of different morphologies are conspicuous in both types of biostromes. Massive tabulate corals are represented by two species of the genus *Favosites* (*Favosites intricatus* POČTA and *Favosites* aff. *goldfussi pyriformis* LECOMPTE) and one species of the genus *Squameofavosites* (S. ex. gr. *cechicus* GALLE). Most branching tabulate corals belong to the genus *Thamnopora* (the species *T. yavorski* DUBATOLOV is mainly abundant). Tabulatomorphic corals are represented by *Heliolites* cf. *praeporosus* KETTNEROVÁ. From this fauna, *Squameofavosites* ex. gr. *cechicus* is the only taxon found in the four sections.

The main builders of the massive-builder biostromes are sponges of stromatoporoid type. They are represented by six species belonging to five genera: *Plectostroma salairicum* (YAVORSKY), which occurs in all the studied sections, *Intexodictyon perplexum* YAVORSKY, *Habrostroma* cf. *centrotum* (GIRTY), *Parallelostroma* sp., and two new species of the genus *Labechiella*.

The rugose coral genera of these sections were largely widespread during the Early Devonian. *Tryplasma* was cosmopolitan and *Embolophyllum* is known in the NE of Russia, Australia (Victoria, New South Wales and Queensland) and N. America. In contrast, *Disphyllum* was not a common genus at this time.

The genera of tabulate corals were common and cosmopolitan, especially from the Emsian onwards. At the species level, these faunas show close affinities with the Pragian Bohemian reef tabulate corals.

The stromatoporoid fauna is peculiar and is represented by a mixture of widespread forms typical of the Silurian (*Plectostroma*, *Intexodictyon*, *Parallelostroma*) and by other genera possibly derived from early Devonian faunas of Asia and North America (e.g. *Habrostroma*). With respect to *Habrostroma*, which was the most characteristic genus of the Eastern Americas Realm during the Lochkovian, it is recorded for the first time in the Pragian of Europe; although it is also known in Australia (Victoria). Apart from these genera, *Labechiella* is also present in these biostromes. This form was very rare in the Early Devonian and up to now it was only known in the Late Lochkovian in Australia (Queensland).

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