

LOWER DEVONIAN REEF BIOTA FROM THE CARNIC ALPS, AUSTRIA: IMPLICATIONS FOR BIOGEOGRAPHY

Andreas MAY¹, Susanne M.L. POHLER², Charles E. BRETT³ & Hans-Peter SCHÖNLAUB⁴

¹ University of Saint Louis - Madrid campus, Avenida del valle, 34, -28003 Madrid, Spain;
maya@spmail.slu.edu

² Marine Studies Programme, University of the South Pacific, Suva, Fiji; pohler_s@usp.ac.fj

³ University of Cincinnati, Department of Geology, 2624 Clifton Avenue, Ohio, 45221, USA

⁴ Geologische Bundesanstalt, Rasumofskygasse 23, A-1031 Vienna, Austria; schhp@cc.geolba.ac.at

Tabulate corals, stromatoporoids and other associated biota from the Pragian/Emsian of the Hohe Warte Limestone in the Central Carnic Alps were investigated and three genera and species of stromatoporoids, seven species of tabulate corals and two genera and species of rugose corals were determined.

Plectostroma latens (Počta) which is the most common stromatoporoid in the Hohe Warte Limestone was previously only known from the Pragian of Koneprusy in Bohemia (MAY 1999). An other common species, *Actinostroma?* ex gr. *clathratum* NICHOLSON was also previously described from Koneprusy (May 2002) but is better known from the Givetian of the Ardennes, Eifel Hills and Bergisches Land, Moravia, northern France and North Vietnam, and numerous other localities. *Schistodictyon?* sp. could not be determined beyond genus level.

Among the tabulate corals the ramose *Scoliopora* (*Protoscoliopora*) *puberulus* (Janet) was so far only known from the late Lower Devonian of the Urals but a closely related form is known from the Koneprusy Limestone. Heliolitids are represented by *Heliolites* aff. *weneri* Oekentorp & Brühl, a form described from the lower Eifelian of the Eifel and *Helioplasma* aff. *aliena* Galle, previously described from the Eifelian of Koneprusy with a closely related form known from the Pragian. Favositids are represented by *Favosites styriacus* Penecke which is also known from the Emsian and Eifelian of Graz, the Emsian of Northern France (Bretagne) and Northern Spain (Asturia), and the Pragian of Vietnam. The small encrusting *Platyaxum* (*Roseoporella*) *altechadatense* (Dubatolov) is known from the Givetian (?) of western Siberia and is accompanied by a small ramose form *Coenites falsus* Dubatolov which is also known from western Siberia but from early Lower Devonian limestones. Another small encrusting form is common among the reefal biota and assigned to *Aulopora* (*Mastopora*) sp.

Rugose corals have not been systematically collected so far and only two species were identified *Stauromatidium* aff. *marylandicum* (Swartz) and *Fasciophyllum* sp. *Stauromatidium marylandicum* is known only from the Lochkovian of North America and generally the genus *Stauromatidium* is known only from North America (Eastern Americas Realm and Old World Realm) with the exception of one find in Usbekistan.

An interesting additional reef organism identified is *Fistulella undosa* Shuysky which is a problematic hydrozoan, also common in the lower Devonian of the Urals.

Biogeographically the faunal composition of the Hohe Warte Limestone is characteristic of the Old World Realm. Noteworthy are the close relationships to the reef complexes of the Pragian of Koneprusy. The age of the fauna could be Pragian or lower Emsian, a better time resolution is not possible.

The limestone facies of the Hohe Warte Limestone shows many parallels to the Koneprusy reef complexes but do appear to be more lagoonal. Although reef building stromatoporoids are common, it is difficult to determine size and geometry of the structures they built due to poor exposure and inaccessibility of the limestone wall. The amount of early marine cements lining open space structures suggests that some types of reefal buildups existed particularly in the upper part of the section. The large amount of calcareous algae seen in the thinsections is

in contrast to Koneprusy which is more reefal in character. It appears that the Hohe Warte facies represents deposits of a well aerated subtidal lagoon with patch reefs. The close relationship to Koneprusy is also reflected in the sea level history deduced from the various Carnic Alps facies units (Pohler et al., 2000, Brett et al, 2001).

References

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