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UNIQUE DISCOVERY OF THE CRINOID *GEMMACRINUS PERPLEXUS* PROKOP ET PETR, 1989 IN THE LOWER DEVONIAN, KONĚPRUSY LIMESTONE (BARRANDIAN AREA, THE CZECH REPUBLIC)

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Abstract. This report presents the first find of almost complete calyxes of the crinoid *Gemmacrinus perplexus* Prokop et Petr, 1989 from the Lower Devonian biosparite Koněprusy Limestone (Pragian) deposited on a reef flank in relatively shallow, well aerated rapid currents. Three calyxes were transported, together with other turbid matter, in the inner part of a gastropod conch (*Epiptychia*? Perner, 1911).

■ Crinoidea, *Gemmacrinus*, Lower Devonian, Pragian, Koněprusy Limestone, Barrandian area, paleoecology.

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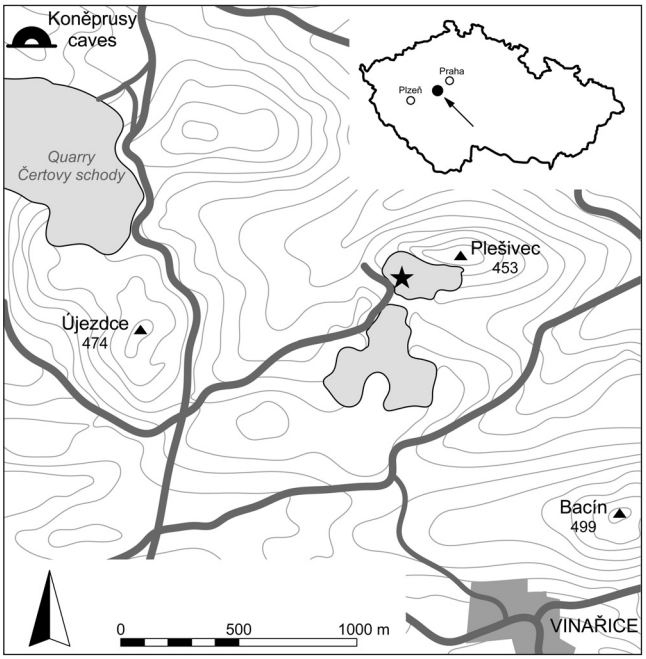
Introduction

In 1992 Mrs. M. Kudasová presented to the Palaeontological Department of the National Museum a stone chip of the bioclastic Koněprusy Limestone coming from the locality "Na Plešivci" quarry (Text-fig. 1), containing the counterpart of the gastropod conch *Epiptychia*? Perner, 1911. In the cavity of this gastropod (subsequently completely dissolved conch) one almost complete calyx and two incomplete calyxes of the crinoid *Gemmacrinus perplexus* are deposited. They were current transported together with coquine to the inside of the broadly conical gastropod conch. Calyxes are located not far from the aperture of gastropod conch.

The skeletal remains of the crinoids genus *Gemmacrinus* Prokop et Petr, 1989 are abundant in the Lower and Middle Devonian deposits of the Barrandian area but they are mostly represented by isolated calyxinal plates i.e. radials, basals and infrabasals and, rarely, by the complete or almost complete calyxes. All remains are common in washings from the sparitic and biomicritic Dvorce-Prokop, Slivenec and Loděnice limestones (Pragian). Numerous isolated calyxinal plates have been found also in the washings from biomicrites of the Třebotov Limestone (Late Emsian) and Choteč Limestone (Eifelian) (Prokop and Petr 1989). All of these sediments were deposited in deeper, poorly aerated parts of the sea, under slow current conditions (Chlupáč 1994, 1998).

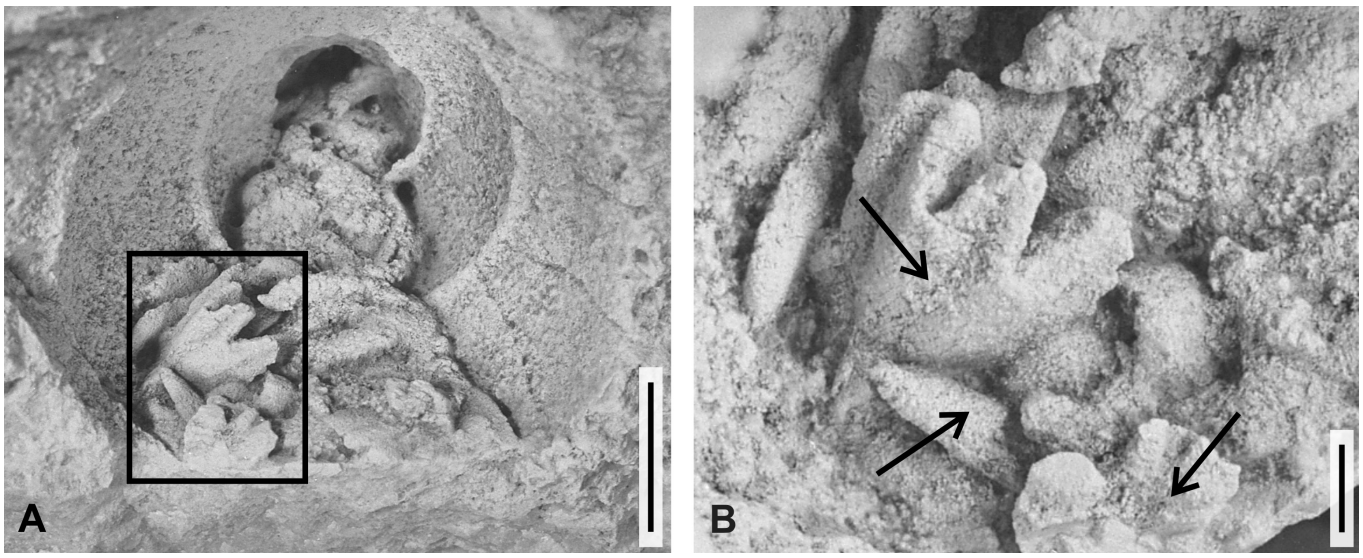
From Lower Devonian Koněprusy Limestone and Zlíchov Limestone ("Chapel Horizon" at the base of Zlíchov Formation) the skeletal remains of the crinoid genus *Gemmacrinus* were represented previously only by isolated calyx platelets. They occur rarely in washings from these biosparitic and sparitic limestones. Both limestones were deposited in a similar environment, i. e. in the detrital reef flank with stronger currents and shallower, better aerated water of the outer perirific zone. Crinoids described here thus represent the first record of the almost complete calyxes of the genus *Gemmacrinus* in the Koněprusy Limestone.



Text-fig. 1. Location of the locality "Na Plešivci" quarry (asterisk).

Systematic palaeontology

Subclass: **Inadunata Wachsmuth et Springer, 1885**
or **Camerata Wachsmuth et Springer, 1885**



Text-fig. 2. ***Gemmacrinus perplexus*** **Prokop et Petr, 1989. A – Specimen NM-L31684; cavity of the conch of gastropod** ***Epiptychia*****? Perner, 1911 with preserved calyxes of crinoid** ***Gemmacrius perplexus*** **Prokop et Petr, 1989. Scale bar represents 5 mm. B – The same specimen; best preserved calyx in detail. Lower Devonian, Pragian, Koněprusy Limestone, Suchomasty, "Na Plešivci" quarry. Scale bar represents 1 mm.**

Gemmacrinus **Prokop et Petr, 1989**

Type species: *Gemmacrinus perplexus* Prokop et Petr, 1989. Lower Devonian, Bohemia, the Czech Republic.

Gemmacrinus perplexus Prokop et Petr, 1989

Text-fig. 2

Type horizon: Lower Devonian, Pragian, Koněprusy Limestone.

Type locality: Suchomasty, "Na Plešivci" quarry (Central Bohemia, Czech Republic).

Material: Three specimens inside the gastropod conch (the specimen NM-L31684 is deposited in the collections of the Palaeontological Department of the National Museum, Prague), here described. Four isolated radial plates from washings from the weathered part of biosparitic Koněprusy limestones (from the Suchomasty, "Na Plešivci" quarry) and 17 isolated radials and basals from washings of the same weathered limestones from the Koněprusy, Čertovy Schody-West Quarry.

Description: Almost entire calyx of the *Gemmacrinus perplexus* Prokop et Petr, 1989 is high, slender, bowl shaped, with convex base (see Ubaghs 1978, p. T99). Basals poorly visible, mostly covered by limestone coquine. Radial plates elongated, interradial processes slim, forming ca. 1/3 height of radials. Radial notches generally narrow, minute, radial facets small, the fulcral ridges not visible.

Remarks: The slender radial plates, elongated IRR processes and minute radial facets of gemmacrinid calyxes here described and are identical with the isolated radials of *Gemmacrinus perplexus* found rarely in the washings from biosparitic limestones of the "Chapel Horizon", Zlíchovian (Prokop and Petr 1989).

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