

## HEXACTINELLID SPONGES FROM DEVONIAN, PONTA GROSSA FORMATION, PARANÁ BASIN, WESTERN-CENTRAL OF BRAZIL

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One of the most rich and diverse period of fossils in Brazil is the Devonian, especially in the Paraná, Amazonas and Parnaíba basins. It is well-known through the scientific community the many sites full of brachiopods, trilobites, echinoderms, mollusks, cnidarian, chitinozoan, polychaeta which inhabited the Brazilian devonian shallow seas. Despite this great abundance, until now fossils of Porifera are rare and only observed at Paraná and Solimões basins. At Paraná Basin, they have been identified through ichnofossils on Bivalve shells at Paraná State, *Clionolithus priscus* (= *Palaeosabella prisca*) and more recently as isolate triaxonic spicules recovered from Mato Grosso do Sul (MS), while in Solimões Basin, Uerê Formation, isolates spicules were recovered. Then, here we report the discovery of fragments of sponge dermal layer after reviewing the samples from MS. The specimens have been recovered at Corredeira do Caité outcrop (18°18'31.06"S; 54°36'30.60"O), Taquari river, Coxim, Mato Grosso do Sul, Ponta Grossa Formation (Grupo Chapada II - Lower), Paraná Basin. This outcrop is composed by tabular beds of fine-grained sandstones, well sorted, sub-angled, with ichnofossils (*Arenicolites*, *Palaeophycus* and *Skolithos*) and centimetric to decimetric concretions. The samples were mainly composed by invertebrate eggs, fish scale, fragments of plants, shells of the brachiopods and conulariids and poriferan fragments with 3D spicules. The fragments of dermal layer are whitish, long with sharp extremities and measures varying from 0.68 to 1.80 cm height and from 0.88 to 3.60 cm width. Inside the outlayer fewer siliceous spicules (tested by Hydrochloric acid) are well-preserved with almost all rays complete, being assigned as monoaxonic (oxea) and triaxonic (hexactine). The first one has measures varying from 0.05 to 0.15 mm of length, while the hexactines vary from 0.15 to 0.50 mm of length. No sign of spicular arrangement or quadrules have been observed. The megascleres are preserved imbedded into the dermal layer in 3D style which indicates low transport of the sponge and maybe rapid burial. Considering the identified spicules and dermal layer is possible to classify the fossils as individuals of Hexactinellida Class. Another intriguing fact is that the dermal layer is filled with most of the invertebrate eggs, raising the possibility of a symbiosis or a host invertebrate species.

**PALAVRAS-CHAVE:** DEVONIAN, PORIFERA, PONTA GROSSA FORMATION.