

CALCAREAN SPONGES FROM UPPER PALEOZOIC, TACIBA FORMATION, PARANÁ BASIN, SOUTH OF BRAZIL

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Porifera is probably the oldest metazoan dating from Cryogenian-Ediacaran. In the Paleozoic, the taxon is well represented by Chengjiang and Burgess Shale from Cambrian, and also by the Permian faunas from Europe and North America. In South America, the Precordillera terrane of Argentina, is the best sponge interval to Cambrian-Ordovician, however, the Brazilian Permian has also been revealed as a good sponge period, especially in Campo Mourão Formation. Then, here we report the first occurrence of *Calcarea* sponge for the upper portion of Taciba Formation, Permian, Paraná Basin. These finds not only ratify the marine paleoenvironment to the turbidites of Taciba Formation, but also mark the occurrence of complete calcarean sponges to Brazilian Paleozoic. 190 Porifera samples associated with *Helminthoidictines* and *Cruziana* icnofossils have been recovered from the José Guelbcke (612880.00 / 7091030.00 SIRGAS 2000, UTM 22S), Claudemir Rertz (613059.00 / 7092649.00 SIRGAS 2000, UTM 22S) and Bemara (613340.95 / 7091257.51 SIRGAS 2000, UTM 22S) outcrops at Itaiópolis, SC. The specimens were composed by no arranged calcarean spicules (tested by HCl and organic scanning electron microscopy), which perhaps were imbibed in the spongin. The megascleres recognized are: monoactine *Oxea* (0.21-10.06 mm); Triactine (0.42-5.69 mm); *Turning fork* – possible diane (0.97-4.48 mm); Tetractine (0.52-5.31 mm); Triaene (0.53-4.38); Pentactine (0.92-9.90 mm). Fewer polyactines microscleras were also observed: *Oxyaster* (0.13-10.25 mm); *Oxyhexaster* (9.70-11.88 mm) and *Aster multi ray* (0.33-3.13 mm). It is well known that different spicules morphologies and sizes, even inside the same species, can vary depending on environmental factors like hydrodynamic, light and turbidity. The fragmented of complete bodies are cylindrical or spherical measuring 4-13 cm of length and 7-17 cm of high. These calcarean sponges cannot be associated to the Heteractinida Class due the presence of triactine and turning fork spicules. Therefore, the body shape and the spicules morphological type allowed reach the taxonomic level of *Calcarea* Class, exclusively marine. We also observed a possible new morphotype, named in this work as Sanidaster-like (0.52-14.93 mm), a monoaxonic straight spicule with irregular transverse spines. They have the same format of microsclere Sanidaster, exclusively of Demospongea and with their oldest register in the Europe Lower Cretaceous.

PALAVRAS-CHAVE: CALCAREA, SANIDASTER, TACIBA FORMATION.