

## **A new Mississippian hexactinellid sponge from the western Gondwana: Taxonomic and paleobiogeographic implications**

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A Mississippian hexactinellid sponge from the western Argentina improves the extremely poor late Paleozoic sponge records from Gondwana. The sponge is included in the subfamily Thysanodictyinae of family Dictyospongiidae. The new genus and species *Minitaspongia parvis* is erected, and its well-preserved spicular structure is described in detail representing the first approximation of the spicule assemblage in Thysanodictyinae. The skeleton is clathrate, three-dimensional with at least two ranks of rectangular openings. This first report of this subfamily outside North America represents the best-known hexactinellid and the first dictyosponge record from the Carboniferous of Gondwana. Unlike the occurrences of Thysanodictyinae in North America, with thick skeletons linked to high-energy shallow water settings, *Minitaspongia* occurs in low-energy water siliciclastic settings related to a cold climate and glacial marine deposits. Accordingly, the complex wall structure of this sponge should not be invoked as a necessary adaptation to high energy and shallow water settings.

**Key words:** Porifera, Hexactinellida, Reticulosa, Carboniferous, Mississippian, Argentina.

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