ACTA PALAEONTOLOGICA POLONICA

New reticulosan sponges from the middle Cambrian of Sonora, Mexico

Matilde Sylvia Beresi, Joseph P. Botting, Juan J. Palafox, and Blanca E. Buitrón Sánchez
Acta Palaeontologica Polonica 62 (4), 2017: 691-703 doi:https://doi.org/10.4202/app.00378.2017

A small assemblage of extremely well-preserved fragments of new sponges has been discovered in calcipelites of the middle Cambrian El Mogallón Formation in the Cerro El Mogallón section, near Arivechi in eastern Sonora, Mexico. The assemblage includes two new reticulosan species referred to *Ratcliffespongia arivechensis* sp. nov. and *Valospongia sonorensis* sp. nov., combined with disarticulated remains assigned to *Kiwetinokia* and additional, currently unidentifiable taxa. The new species represent the first records of these Cambrian genera from Mexico, although they are widely distributed at low latitudes, being previously best known from Utah but extending through Laurentia and South China. This middle Cambrian fauna indicates that there was considerable continuity of the deeper-water hexactinellid sponges between the warm peri-platform of Laurentia and the peri-continental Cambrian platform of Sonora. The new material supports the impression of extremely wide distribution of Cambrian sponge genera, with local diversification at species level within regions, in contrast to much greater generic-level endemism during the Ordovician Period.

Key words: Porifera, Hexactinellida, Reticulosa, Burgess Shale-type fauna, biogeography, Cambrian, Mexico.

Matilde Sylvia Beresi [mberesi@mendoza-conicet.gob.ar], Instituto Argentino de Nivología, Glaciología y Ciencias Ambientales (IANIGLA) Consejo Nacional de Investigaciones Científicas y Tecnológicas (CONICET), Av. A. Ruiz Leal s/n, Parque General San Martín, 5500, Mendoza, Argentina. Joseph P. Botting [acutipuerilis@yahoo.co.uk], Nanjing Institute of Geology and Palaeontology, Chinese Academy of Sciences, 39 East Beijing Road, Nanjing 210008, China, and Department of Natural Sciences, Amgueddfa Cymru–National Museum Wales, Cathays Park, Cardiff CF10 3EP, UK. Juan J. Palafox [palafox@correo.geologia.uson.mx], Departamento de Geología. Universidad de Sonora, Blvd. Luis Encinas y Rosales, CP 83000, Hermosillo, Sonora, México. Blanca E. Buitrón Sánchez [blancab@unam.mx], Universidad Nacional Autónoma de México, Instituto de Geología. Departamento de Paleontología, Ciudad Universitaria, CP. 04510, México D.F., México.

This is an open-access article distributed under the terms of the Creative Commons Attribution License (for details please see creativecommons.org), which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.


Full text (1,411.3 kB)