

Sieve-type normal pore canals in Jurassic ostracods: A review with description of a new genus

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Sieve-type normal pore canals (StPC) occur commonly in living and fossil cytheroid ostracods but their biological function(s) and evolutionary history are poorly known. The new genus *Minyocythere* and its four species: *Minyocythere macroporosa* sp. nov., *M. angulata* sp. nov., *M. maculosa*, and *M. tuberculata* from the Middle Jurassic have StPC prominently developed, display a range of normal pore canals, and provide a context for review of the geological record and palaeobiological potential of these structures, and their application as a taxonomic tool compared with classical approaches. The related Cretaceous genus *Dolocythere* is reviewed and *Dolocythere amphistiela* sp. nov. described. The significance of StPC for comparative morphology, systematics, palaeobiology and environmental interpretation are discussed. The range of normal pore canals observed, including StPC, is greater than previously described and several types can occur on one animal implying different life functions. The potential of normal pore canals especially StPC for systematic use is established although good preservation is essential. The functional significance of normal pore canals and their setae must be verified with living material before their evolutionary history can be deduced and their application to palaeoenvironmental interpretation and modern environmental monitoring enhanced.

Key words: Ostracoda, Cytheroidea, normal pore canals, systematics, Jurassic, Cretaceous, Europe.

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