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# A new coral with simplified morphology from the oldest known Hettangian (Early Jurassic) reef in southern France

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The family Zardinophyllidae (Pachythecaliina) represents one of the most enigmatic coral groups known from the beginning of Mesozoic record of stony corals. They share some features with Paleozoic rugosans (overall architecture of the corallite) but also modern-day scleractinians (aragonite mineralogy). Fossil record of zardinophyllids was up to now restricted to the Triassic. Here we describe a new coral genus *Cryptosepta* collected in the oldest known Jurassic (Hettangian) reef in the Ardèche department in southern France. *Cryptosepta* gen. nov. has poorly developed (cryptic) septa, which is a peculiarity that extends the boundaries used to distinguish post-Palaeozoic corals and an oversimplification that could support reinitialisation of the evolutionary clock during extinction events or that support an adaptation to specific environmental conditions. Occurrence of *Cryptosepta* gen. nov. in Jurassic suggests zardinophyllid survival through the Triassic–Jurassic boundary, and may represent (possibly with Sinemurian genus *Pachysmilia*) a missing link to Amphiastreidae.

**Key words:** Anthozoa, Pachythecaliina, T-J boundary crisis, survival, evolution, Jurassic, Hettangian, France, Ardèche.

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