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Monospecific rugosan assemblage from the Emsian hydrothermal vents of Morocco

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Unique monospecific assemblages of small, solitary, nondissepimented rugose corals from the Devonian deep-sea hydrothermal venting systems of the Hamar Laghdad (Anti-Atlas, Morocco) are described. Assemblages of numerous rugosans (coral meadows) have been found around the outlets of venting channels irregularly forked within the Emsian mud mound sediments. The majority of rugose corals, which settled around vents, reveal a bizarre pattern of growth called here 'calice-in calice'. The phenomenon of 'calice-in-calice' growth is related to selective survival of coral larvae i.e. it is postulated that the larvae, which settled within the calices of dead individuals were more successful in their development than those that settled elsewhere. They probably use empty calices as shelters against the physical (hot or poisoning fluids) or biological (predators) factors. The empty calices also provided a hard surface for attachment. The presence of numerous carapaces of ostracods within the calices of dead rugosans suggests a strong trophic relation between corals and ostracods, which lived around hydrothermal vents. The new genus and species *Hamarophyllum belkai* is proposed.

Key words: Rugosa, hydrothermal venting systems, mud mounds, Emsian, Hamar Laghdad, Anti−Atlas, Morocco.

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