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A new interpretation of Astrorhizae in the Stromatoporoidea

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The results of the author's studies on the morphology, function and taxonomic value of astrorhizae in the Palaeozoic Stromatoporoidea are presented. In contradistinction to previous views according to which astrorhizae were considered as structure formed by stolons or zooids of the Stromatoporoidea, the author concludes that they are traces of foreign orgoanisms associated with the Stromatoporoidea. The relationships between both organisms were probably commensal or mutualistic in character. On the basis of associations observed in Recent sponges and coelenterates, the author has discussed the possibility of a plant (algae) or animal (non-skeletal coelenterates) nature of the organisms which were associated with the Stromatoporoidea. Depending on the manner of connecting astrorhizae with the skeletal tissue of the coenosteum, two types of these structures, i.e. a) integrated and b) separated, have been distinguished, and their morphological and growth interpretation attempted. The new interpretation of astrorhizae allows one to eliminate these structures as diagnostic features of the Stromatoporoidea which may to a considerable extent simplify the taxonomy of this group.

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