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IF THE SCLERACTINIAN CORALS ORIGINATED FROM RUGOSAN?

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The question is far from solution because number of Paleozoic scleractiniamorphs increase from year to years. In some cases new findings are correlated with modern data on Paleozoic divergence between Rugosa and Scleractinia. This hypothese are partly supported also by findings Permian Conophyllia Orb. in Japan and Houchangocyathus Ezaki in China.

Need to transform our previous rigid definitions and suggested «laws» for anthozoan corals septal arrangement today are more conclusive than yesterday. After comprehensive review of modern corals origin and their early evolution trends (Stanley, 2003) we need to develop new methods and models of phylogenetic relationships between main groups of Anthozoa. The heterogenity of Scleractinia which was postulated before only by paleomorphologists (Yakovlev, 1926; Wells, 1967; et al.) today are new evidences from isotopic biogeochemistry and molecular genetics.

In South Primorye the Midian complex of Rugosa are presented mostly by streptelasmatids (with solitary / colonial ratio 20:3). Howewer, the Lower Dzhulfian coral community are ratio between solitary and colonial species is 5:23. Upper Dzhulfian complex are composed only by two species of solitary plerophyllids and one tabulate species (*Pseudofavosites kotljarae Ivan. et Krop.*). Similar picture on the last stages of Permian corals development was described in Japan (Minato, 1973). Some Tabulata and Rugosa probably survive here the end – Permian crisis in small and isolated refugia. The Middle – Late Triassic scleractiniamorphs occur Russian Far East in different combinations of solitary and colonial species and vary in relative importance through time indicating four stages: Anisian, Ladinian – Early Carnian, Carnian – Norian and Rhaetian. Bilateral septal plan are typical for several rugosomorphs and scleractiniamorphs. After Rhaetian regression only stylophyllids and conophyllids crossed the Triassic / Liassic boundary.

Stable isotops composition of Far Eastern Triassic coral skeletal parts ranged from + 0.9 ‰ to 3.1 ‰ for carbon – 13 and from – 2.2 ‰ to – 6.4 ‰ for oxygen – 18. Enrichment in carbon – 13 as a result of photosynthesis process which are not presented in non – zooxanthellae corals. The majority of the Late Triassic scleractinians from Sikhote – Alin were zooxanthellate and this is a evidence of significant role of coral – algae coevolution in reefal facies. All earliest scleractinian corals was hermatypic as last rugosan. Total combination of facts are correlated with polyphyletic model of scleractinian corals origin from different skeletized and soft-bodies ancestors.