

DEVONIAN RUGOSE CORALS FROM THE KARAKORUM MOUNTAINS (NORTHERN PAKISTAN).

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The Karakorum Block is regarded as a microplate of „Gondwanan“ origin and was part of the Cimmerian continent („Mega Lhasa“) which rifted away from the northern margin of Gondwana during the Late Palaeozoic/Early Mesozoic. From the Northern Karakorum Range (Yarkhun and Karambar River Valleys) an Upper Givetian to Lower Frasnian rugose coral fauna of the Shogram Formation is described. The fauna is dominated by cosmopolitan genera such as *Hexagonaria*, *Disphyllum*, *Macgeea* and the *Temnophyllum/Spinophyllum* group, generally showing a geographically wide distribution, although being absent from the Eastern American Realm in the Upper Givetian/Lower Frasnian. Therefore its components are of little use for biogeographical deductions at sub-realm level and in explaining the relation between the Karakorum Range and other Cimmerian crustal blocks. A remarkable exception is the first record of the genus *Pseudopexiphyllum* outside of Turkey, indicating a connection to the western part of the Cimmerides.

On species level, the coral fauna of the Shogram Formation is characterized by the development of a diverse and rather unique fauna including about 35 taxa, that differs from the faunas known from neighbouring crustal blocks. So far, faunistic links to Iran (Lut Block), Central Pamir, the Lhasa Block and Western Qiangtang are not clear, and although each of these fragments are believed to be closely connected they were obviously not in direct contact. However, the Karakorum fauna is remarkably close to the one known from the Helmand Block in Afghanistan, showing a very similar generic composition, that includes numerous morphologically closely related, although not identical species.

Accordingly, the restricted faunal exchange led to the development of new taxa. Distribution of the new species of *Spinophyllum*, *Pseudopexiphyllum* and *Pseudozaphrentis* is limited to the Karakorum Mountains. Reasons for this individual faunistic development and the missing faunal exchange are unexplained, but suggest that some kind of active faunal barrier must have existed during the Devonian, which led to the development of the specific Karakorum fauna.

With the exception of *Phillipsastrea orientalis* REED 1922, which is elsewhere only known from the Burmese Devonian, the occurrence of some other species reveal a connection to regions which are regarded as biogeographically rather unrelated. A weak relation to central European faunas is indicated by the occurrence of characteristic species of *Macgeea* and *Hexagonaria* which are known from the Ardennes and the Holy Cross Mountains. More unusual are the faunistic affinities to the Altai-Sayan region shown by the surprising occurrences of species of *Spinophyllum* and siphonophrentid corals which are morphologically very close to those known from the Altai Mtns. and Kazakhstan.