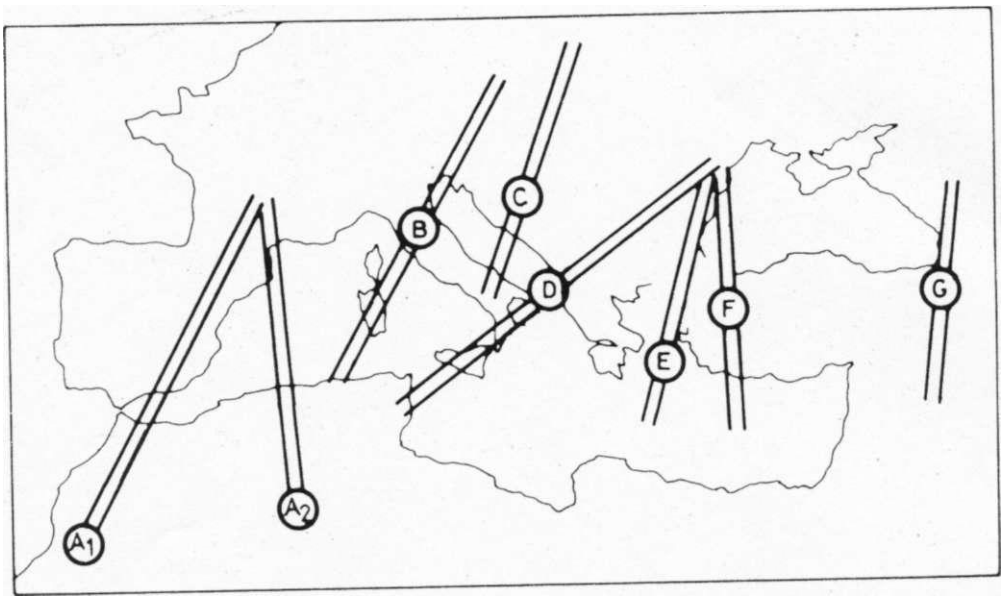
IGCP PROJECT No 5

Correlation of Prevariscan and Variscan events of the Alpine-Mediterranean mountain belt

NEWSLETTER

No.7 (JULY 1987)



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A PECULIAR BRACHIOPOD FAUNA IN THE MIDDLE PERMIAN OF THE VELEBIT MT. (CROATIA, YUGOSLAVIA)

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Introduction

Mt. Velebit" a 145-km long mountain of the Dinaric system, ranging along the Adriatic coast. Upper Paleozoic rocks outcrop in several tectonic belts on its inland slopes. A more or less complete stratigraphic column from the Middle Carboniferous to the end of the Permian has been reconstructed (Ramovs et al., 1984).

Middle Permian black limestones form a 30-m thick fossiliferous zone within the Late Permian dolomite series. Besides fusulinids and calcareous algae, limestones comprise brachiopods, bivalves, gastropods, cephalopods, bryozoans, hydrozoans and calcisponges.

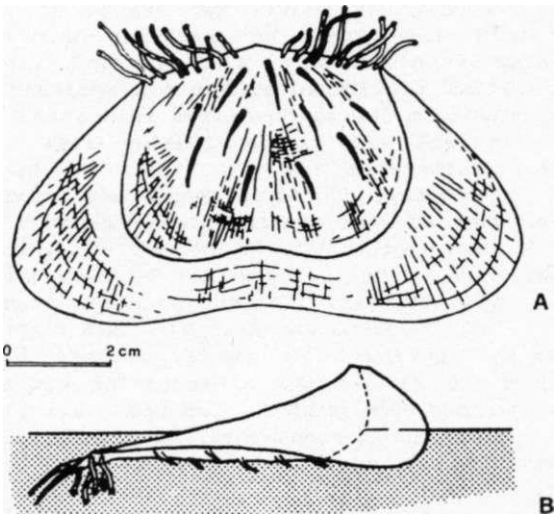

Fig.l: Ramovsina likana Sremac: A- ventral valve, B- living position (side view).

Brachiopod communities

Well-preserved brachiopods were collected at four localities in the area between Brusane

Table 1: Distribution of brachiopod species in different environments: A- calcareous mud, B- bioherm, C- biostrome.

	A	B	C
Enteletes microplocus Gemmelaro	+	+	
E. salopeki Sremac	+	+	
Orthotichia derbyi (Waagen)	+	+	
O.magnifica Grabau		+	
Plicatoderbya sp..(n.sp.?)		+	
Ramovsina likana Sremac	+		
Sphenosteges sp.(n.sp.?)		+	
Sphenosteges sp.	+		
Spyridiophora reticulata (King)	+		
S.cf. compacta Cooper & Grant	+'		
Tschernyschewia cf.typica lata Simic	+		
Megatschernyschewia longiseptata longiseptata Sremac	+		
M.longiseptata lata Sremac	+		
M.kochanskae Sremac	+		
Megatschernyschewia sp.(n.sp.?)	+		
Megatschernyschewia sp.	+		
Krotovia wallaciana (Derby)	+		
Marginifera magniplicata (Huang)	+	+	
Paramarginifera himalayensis (Diener)	+		
P.cf. himalayensis (Diener)	+		
Liosoteila sp.(n.sp.?)		+	
Waagenoconcha cf. gangetica (Diener)	+		
Waagenoconcha sp. (n.sp.?)	+		
Tyloplecta sp.	+		
Linoproductus lineatus (Waagen)	+		
Linoproductus sp.	+		
Keyserlingina filicis velebitica Sremac			+
Leptodus nobilis (Waagen)			+
Spirigerella sp.	+		
Phricodothyris dispar (Diener)		+	
Phricodothyris sp.	+		
Martinia cf.orbicularis Gemmelaro		+	
M.velebitica Sremac	+	+	
Martiniopsis sp., ex gr. orientalis Tschernyschew	+		
Dielasma angusta Netschaew	+		
D.cf.plica Kutorga	+		
Notothyris cf.mediterranea (Gemmelaro)	+		
Texarina parallela Cooper & Grant	+		

and Baske Ostarije. Three types of communities may be distinguished:

Reef community

The reef community is characterized a low number of taxa but an enormously large number of specimens. Shells are massive, often asymmetrical in shape and ornamentation. Though having a delthyrium pedicle, adult brachiopods probably lived unattached among the main reef-builders (Calcispongiae, Hydrozoa, Bryozoa).

Calm-water community

The calm-water community is composed of numerous predominantly productoid taxa. Productoids (one or two representatives of each species) were anchored by spines in the muddy substrate. Large spinose strophomenoids (Ramovsina) were supported by gutters (Fig. 1) (Sremac, in print). A few terebratulid species were attached by. a foramen pedicle. Forms with a delthyrium pedicle (Enteletes, Martinia) also occur, but are rather scarce.

Oldhaminoid community

Numerous aberrant oldhaminoids (Leptodus and Keyserlingina) built a lense (? biostrome) within the productoid limestone. Shells were attached on each other or on broyzoan branchlets. The locality of Crne Grede is considered to be the richest finding-place of Keyserlingina in the world, with 40 specimens of Keyserlingina filicis velebitica Sremac (Sremac, in print).

Conclusion

Most of the genera from Mt. Velebit belong to the Indo-Aremnian type of fauna which colonized the Upper Paleozoic tropic and subtropic seas of Europe, Asia and America. Great similarity with Soviet, Himalayan, Chinese and Italian brachiopod faunas has been observed.

Brachiopods occur in three types of communities: reef (Enteletes-Martinia) community, calm-water (productoid) community and oldhaminoid biostrome.

A great number of new taxa (new family Ramovsiinidae, new genera Ramovsina and Megatschernyschewia, 11 new speices), indicate the endemic character of the fauna (Sremac, in print).

REFERENCES

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