

INVESTIGATIONS ON MIDDLE TRIASSIC BRACHIOPOD FAUNAS FROM
THE BALATON HIGHLAND /TRANS-DANUBIAN CENTRAL RANGE, HUNGARY/

József PÁLFY

The present paper deals with a brachiopod fauna collected from four localities of the Balaton Highland. The Anisian Recoaro Limestone has yielded a rich material comparing with other brachiopod faunas of similar age. The fact, that the studied localities are in the stratotype area of the Pelsonian Substage, gives further importance to the present work. Recent investigations must be considered as a revision of classical localities, known for more than a century.

The systematic studies showed the presence of 35 taxa, of which two species have first record in Hungary, and three other seem to be new.

The abundant material has been examined from the point of view of paleoecology, paleobiogeography, stratigraphy and evolution, with statistical methods, too.

The paleoecological study allowed to interpret the differences in faunal distribution of the four localities as the consequence of different habitats and conditions of fossilization due to the varied bottom relief of a shallow-water shelf environment.

The comparison with a number of other Anisian brachiopod faunas shows strong affinity to those in the Southern Alps and in the Western Carpathians. Important similarity exists to the Dinarids, and tracing toward the Far East the more or less uniform character of the Tethyan shelf can be proved by the overall presence of several species. The actual differences of faunas might have been caused by ecological factors. Despite the common species, the brachiopod assemblage of the Balaton Highland is fairly distinct in faunal structure from

the Germanic type faunas, like the Southern Transdanubian /Mecsek, Villány/ ones.

The relative stratigraphic position of the three main sections was clarified by using other authors' data based on ammonoids. The stratigraphic differences of the fossiliferous Recoaro Limestone remain within the boundaries of the Pelsonian Substage, which is not so significant considering the average life span of a brachiopod species. It was possible to determine the stratigraphic range of some traditional index species /Decurtella decurtata, Piarorhynchella trinodosi/ more precisely.

New data concerning the evolutionary links of rhychnellids made possible to trace back two important lineages of this group.

This paper contains only the general results of a one year research activity. The results of studies in systematic paleontology will be published elsewhere in the future.