

PALEOENVIRONMENTAL DISTRIBUTION OF MIDDLE TRIASSIC AMMONOIDS IN THE BALATON HIGHLAND (HUNGARY)

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Large ammonoid faunas (several thousand specimens) have been collected from several sections of the Balaton Highland, encompassing the latest Anisian to Early Ladinian interval (Trinodosus and Reitzi Zones). The ammonoid assemblages are dominated by "sphaerocones" (Ptychitidae and Arcestidae); this clearly shows that the whole territory was under moderately deep, pelagic influence. The different topographic elements of the vertically dissected pelagic shelf (pelagic plateaux and basins) are characterized by ammonoid assemblages of different compositions. The environmental distribution of special morphogroups of ammonoids shows that the proportion of "coronates" (strongly ornamented ceratitids) is consistently lower in the basins than in the pelagic plateaux, whereas "sphaerocones" (Ptychitidae + Arcestidae) show inverse relationship. During the studied interval, the proportion of "coronates" decreases, whereas the proportion of "sphaerocones" increases in time in the whole territory (both in the basins and on the pelagic plateaux). This relationship is used to estimate water depth and changes in bathymetry. The results show that both the plateaux and the basins subsided gradually during the time interval in question and the depth difference between them slightly increased. This is in accordance with the general trends of subsidence expected on passive and/or transtensional continental margins and fits well into the paleogeographical picture outlined for the mid-Triassic shelf region including the Southern Alps and the Transdanubian Central Range.

The environmental distribution of ammonoid genera has been studied in the higher part of the Reitzi Zone (Reitzi and Avisianum Subzones). This stratigraphical interval is represented in seven sections and several other localities of the Balaton Highland and provided an extremely rich ammonoid fauna (over 2000 specimens and 40 species, 19 genera). Nine genera have shown definite environmental distribution. *Hungarites*, *Longobardites* and *Latemarites* seem to be connected to the peri-platform areas. The genera *Parakellnerites* and *Aplococeras* show partly similar distribution. *Proarcestes*, *Halilucites* and *Ticinites* are frequent in the basin areas and never occur in the peri-platform areas. Remarkably, in many cases the shell morphology of the ammonoids does not show direct correlation with the paleoenvironment. For example, the involute, compressed and smooth *Hungarites* and *Longobardites* are predominant in the peri-platform areas, though these morphotypes are traditionally believed as deeper-water, pelagic forms. On the other hand, the evolute, strongly ribbed *Ticinites* and *Halilucites* were found mainly in the basinal sequences.

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