TRIASSIC AMMONOIDS AND BIOSTRATIGRAPHY OF THE BALATON HIGHLAND: NEW RESULTS FROM THE ANISIAN, LADINIAN AND CARNIAN

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The Triassic formations of the Balaton Highland and their ammonoid fauna are well-known from the famous and voluminous descriptions by J. Böckh and E. Mojsisovics. The multi-authored "Balaton Monograph" from the first decade of this century includes the important contributions of C. Diener, G. Arthaber, F. Frech and L. Lóczy which made the Balaton Highland one of the most important and renowned areas for Triassic stratigraphy. In the last fifteen years we have made significant, detailed collections supported by the Hungarian Geological Institute, the Hungarian Natural History Museum and the National Scientific Research Fund. The collecting and field work, led by the present author, was done mainly by T. Budai, L. Dosztály, and I. Szabó. The study area lies on the northern shore of Lake Balaton, where nine sections were collected in detail and more than 22 other localities yielded ammonoids. The ammonoid fauna consists of more than 12000 specimens and is deposited in the Geological and Paleontological Department of the Hungarian Natural History Museum. The occurrence of ammonoids is chronostratigraphically restricted to the Middle Anisian to Middle Carnian interval. The most important biostratigraphic results have partly been published (e.g.: Vörös 1987, 1993, Tatzreiter & Vörös 1991, Vörös et al. 1996, Márton et al. 1997). The zonal/subzonal scheme worked out or applied for the Middle Anisian to Lower Carnian interval of the Balaton Highland is presented and the most important measured stratigraphic sections with range charts are shown with illustration of the ammonoid fauna.

Perhaps the most important results of our biostratigraphic studies are those concerning the Anisian/Ladinian boundary interval. On the basis of the detailed biostratigraphic data from the Balaton Highland and considering the South Alpine results, a detailed ammonoid zonal/subzonal scheme of this interval was proposed. The correlation of subzones between the Southern Alps and the Balaton area is perfect below and above the proposed Anisian/Ladinian stage boundary (base of the Reitzi Zone).

References:

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