NEW RESULTS IN PALAEONTOLOGY AND STRATIGRAPHY OF THE PALAEOZOIC OF THE TRANSDANUBIAN CENTRAL RANGE

Gy. Majoros

Abstract

The Palaeozoic of the Transdanubian Central Range contain Ordovician to Permian formations, subdivided into four lithological/structural groups: 1. Metamorphic Palaeozoic forming the crystalline basement; 2. Upper Carboniferous coarse clastics; 3. Late Hercynian granitoid; 4. Permian fluviatile-shallow marine formations (Fig 1.).

1. The Ordovician to Lower Carboniferous metamorphic formations are poorly known due to the extremely limited outcrop area. The Ordovician-Silurian-Devonian sequence form the Balaton Phyllite Group. It is a more or less continuous rock association, consisting of several formations. The pre-metamorphic lithology allows a tripartite subdivision from bottom to top:

A volcano-sedimentary sequence is overlain by 1000 m of siltstone--fine sandstone then by Devonian limestone.

Biostratigraphic evidences are mostly from the limestone. Other fossils are Lower Silurian acritarchs and conodonts and Lower Ordovician acritarchs.

The metamorphic Palaeozoic complex also contains the Lower Carboniferous (Visean) Szabadbattyán Limestone. Rare, subsurface occurrences of dark grey shale, sandstone, siliceous shale of very low metamorphic grade are probably Lower Carboniferous formations, too.

Despite large information gaps we consider the metamorphic complex as a Hercynian nappe system (Fig 2.).

2. The Upper Carboniferous Füle Conglomerate in the Balatonfő area contains Upper Stefanian-Lower Westphalian micro- and megaflora. The 600 m thick sequence lies in an unknown tectonic position.

3. There are Late Hercynian, post-collisional granite, Granodiorite intrusions along the SE margin of the Central Range (Velence Granite, Gárdony Quartzdiorite). These are discordant plutons intruded into the anchimetamorphic Balaton Phyllite surrounded by contact meta-

morphic aureoles.

4. The first sediment of the Alpine sedimentary cycle starting in Middle Permian time is the Balatonfelvidék Red Sandstone, interfingering with hypersaline lagoonal and shallow marine formations (Tabajd Anhydrite, Dinnyés Dolomite, Szigliget Limestone with Mizzias).

The metamorphic Palaeozoic is unconformably overlain by unmetamorphosed Upper Carboniferous and Permian sediments. Some isotope data indicate tectono-metamorphic events at the Carboniferous/Devonian boundary (Bretonian phase) and at the Lower/Middle Carboniferous boundary (Sudetic phase). The latter event may have been the time of nappe formation.