

Studia breviora

Palynological data about the Middle Triassic Age of part of the Drimos-Melia Formation, Northern Greece

In 1996, the first biostratigraphical data that gave evidence for the presence of Triassic in the Drimos-Melia Formation, Northern Greece were published (Dimadis et al., 1996). Up to then the age of this formation was defined as Jurassic-Cretaceous or only Cretaceous by Kopp (1965), or as Cretaceous-Paleocene (?) by Buggazi et al. (1989).

In dark-grey aleurite argillites from Drimos-Melia Formation right to the northwest from the village of Melia very well preserved casts of two specimens of thin-shelled bivalves were found and determined as *Halobia superba* Mojsisovicz by Milka Encheva (Dimadis et al., 1996). This is a typical Triassic species characteristic of Upper Ladinian – Lower Carnian.

Considering that the rocks containing the bivalve were very abundant of floral remains, the authors of the present report carried out a palynological analysis of a piece from the same rocks preserved by A. Goranov. The palynological studies were made by L. Petrunova.

A small piece of rock was separated from the sample figured on plate 1, fig. 1 in the article of Dimadis et al. (1996), where the two valves of the finely preserved casts of *Halobia superba* Mojsisovicz can be seen. This piece was laboratory processed in the traditional Triassic methods including treatment with HCL, HF, Luber mixture (HNO₃ + NaCl), KOH and CdJ (Cd – heavy liquid). The final organic deposition is kept in the Geological Institute of BAS, Sofia.

A great amount of H₂O-glycerine samples was studied with a light microscope. One specimen of each of the following palynomorph species was found – the spores *Camarozonosporites rudis* (Leschik, 1956) Klaus, 1960 and *Perotrilites minor* (Madler, 1964) Antonescu & Taugourdeau-Lantz, 1973, and the acritarch *Micrhystridium* sp.

Some may consider the presence of the two spore species together a little uncommon. This comes from the fact that *Perotrilites minor* is nominated from the sediments of the Lower Muschelkalk in Germany (Madler, 1964). According to Brugman (1983) the species is characteristic for Anisian Stage. Later some finds were found in the deposits of Lower Keuper in Germany (Heunisch, 1986). In Bulgaria *P. minor* is determined in packet No 17 from the Mitrovtsi Formation, which was proved by palynomorphs as Longobardian (Late Ladinian) Age (Petrunova-Olova, 1988a, b). The Mitrovtsi Formation covers the lower part volume of the Iskur Carbonate Group (Tronkov, Monov, 1971) and its definition was based on dark sandstones, aleurolites and argillites (Upper Ladinian – Lower Carnian Substages).

Unlike the first one the species *Camarozonosporites rudis* was first found in the Middle Keuper in Switzerland

by Leschik (1956); later Visscher & Brugman (1981) pointed out to its first appearance in the lower part of the Carnian Stage (controlled with ammonoid finds in the Alps) ranging to the end of the Rethian Stage in Europe. In Bulgaria this species was found in the rocks of the same formation (packet No 17 of the Mitrovtsi Formation) with proved Longobardian Age.

As for the biostratigraphical occurrence of *Micrhystridium* sp. – the representatives of the acritarch genus in the Triassic in our country live through the end of the Ladinian Age.

In conclusion, the presence of the palynomorph species *Camarozonosporites rudis*, *Perotrilites minor*, *Micrhystridium* sp. may be considered as another proof that confirms the stratigraphical location of a part of the Drimos-Melia Formation sediments in Northern Greece stated by Dimadis et al. (1996) and makes it more precise i.e. – Longobardian Substage of the Ladinian Stage.

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