

*Studia breviora*

Palynological analysis of samples from the Padala Formation

The Padala Formation is introduced by Zagorchev et al. (1999) for conglomerates and breccia-conglomerates with sandstone interbeds. Coal seams are known since the studies by Georgi Bonchev and Georgi Konyarov in 1912 and 1932,

occurrence; numerous *Polypodiaceosporites* div. sp. — typical of the Lower Oligocene; cf. *Ephedripites* sp. — transient but very frequent in the Lower Oligocene; *Triatriopollenites* sp. — transient in the Eocene and Oligocene; cf. *Boehlensipollis hohli*

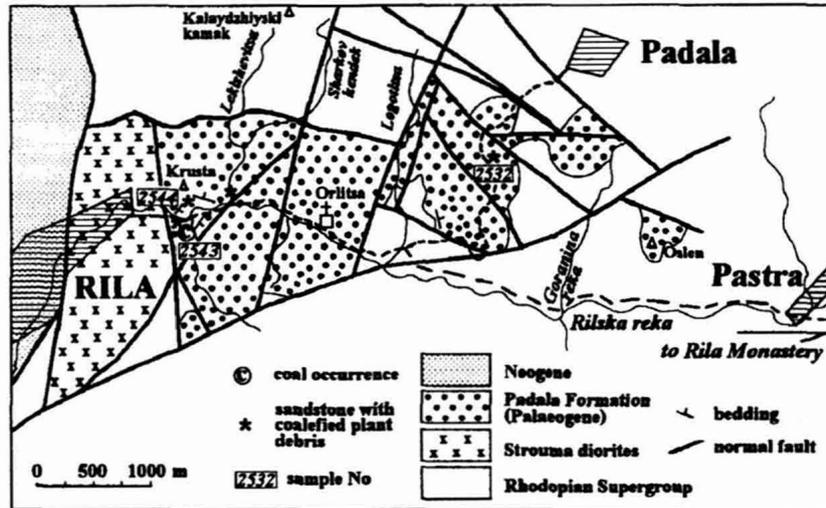


Fig. 1. Geological map of the Padala graben (Zagorchev et al., 1999) with sample location

respectively. The sediments have not been dated up to now although the presence of badly preserved plant remains has been recorded by all researchers.

Four samples (Fig. 1) have been taken by I. Zagorchev, A. Goranov and I. Boyanov from the coal near the locality "Krusta" (samples 2543, 2543a) and from sandstone with coalesced plant debris (samples 2532, 2544). They have been processed by Elena Tomova at the Palynological laboratory of the Geological Institute following the standard methods applied in the Laboratory. All samples contain abundant coalesced plant tissues. However, the palynological assemblage is poor. The organic residue from sample 2532 contains abundant plant debris of dark and not identifiable plant fragments. Single pollen grains of *Pinuspollenites* sp. have been determined; this genus has a wide occurrence throughout the Tertiary. Sample 2543 (coal and coal-bearing shale) yielded abundant plant fragments but no pollen and spores have been found. Sample 2544 is not very rich in plant remains and contains single spores and pollens, and namely: *Leiotriletes* sp. (Tertiary); *Laevigatosporites haardti* (R.Pot. & Ven.) — rare in the Eocene, frequent in the Oligocene of Bulgaria; *Reticuloidosporites favus* (R.Pot.) — same

W.Kr. — guide species for the Lower Oligocene.

Based mostly on the experience in Bulgaria, this assemblage can be considered as Oligocene, and indicative for the Lower Oligocene (Rupelian Stage). It can be compared to the assemblages found in the boreholes near the villages of Katrishte and Palatovo, i.e., to the Lower Oligocene siltstone-sandstone formation (Чернявска et al., 1989) that is a lateral correlate to the Padala Formation.

References

Černjavskaja, S. 1977.— *Geologica Balc.*, 7, 4; 3-26.  
 Zagorchev, I., Goranov, A., Vulkov, V., Boyanov, I. 1999.— *Geologica Balc.*, 29, 3-4; 57-67.  
 Чернявска, С., Загорчев, И., Попов, Н. 1989.— *Geologica Balc.*, 19, 5; 60.

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