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New findings of the carboniferous calcareous algae in the Bükk Mts., northern Hungary

Csaba GULYÁS-KIS¹ & Jasenka SREMAC²

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The shallow marine Mályinka Formation which is situated in the Northern Bükkian Anticline (Bükk Mts, North Hungary) is composed of shale, metasiltstone and metasandstone with fossiliferous limestones and scarce quartz-conglomerate horizons (PELIKÁN et al., 2005). Lithological composition is quite similar to the Upper Carboniferous Auernig Group in the Carnic Alps and the Carboniferous of the Dinarides (VAI & VENTURINI, 1997). Close faunistic-floristic and facial relationships are recognized between the marine Upper Paleozoic of the Bükk Mts (NE Hungary), Dinarides and Carnic Alps (BALOGH, 1964; FÜLÖP, 1994).

Bükkian Palaeozoic algae were firstly investigated by JABLONSKY (1919) who determined the Carboniferous age. The first monograph of the Bükkian algae was published by HERAK & KOCHANSKY (1963), who determined three taxa (*Anthracoporella spectabilis* PIA, *Anthracoporella* sp. and *Dvinella comata* KHVOROVA) from the main part of the Carboniferous. Later investigations (NÉMETH, 1974; FÜLÖP, 1994) added several new Carboniferous species to the list: *Komia abundans* KORDE, *Achaolithophyllum* cf. *missouriense* JOHNSON, *Ivanovia* sp., *Anchicodium* sp., *Osagia* sp., *Vermiporella* sp., *Oligoporella* sp.?, *Macroporella* sp.

Our research resampled the earlier investigated outcrops, together with several new exposures in the Bükk Mts. All together 27 algal taxa were determined: *Aphralysiaceae* sp. indet, *Fourstonella* sp., *Ungdarella uralica* MASLOV, *Komia abundans*, *Petschoria* sp., *Achaolithophyllum* cf. *johnsoni* RÁCZ, *Achaolithophyllum* cf. *missouriense* JOHNSON, *Ivanovia* sp., *Anchicodium* sp., *Eugonophyllum* sp., *Dvinella comata*, *Beresella* sp., *Praedonezella* sp., *Donezella* sp., *Anthracoporella spectabilis*, *Anthracoporella* cf. *vidua* HERAK & KOCHANSKY-DEVIDÉ, *Oligoporella* sp.?, *Mellporella* sp., *Epimastoporella* sp., *Epimastopora* sp., *Epimastopora* cf. *alpina* KOCHANSKY & HERAK, *Macroporella* sp., *Macroporella* cf. *ginkeli* RÁCZ, *Gyroporella* cf. *intraseptata* KOCHANSKY-DEVIDÉ, *Gyroporella* sp., *Vermiporella* sp., *Osagia* sp. Several algal and microproblematical taxa were found for the first time in this area (*Fourstonella* sp., *Ungdarella uralica* MASLOV, *Archaeolithophyllum* cf. *johnsoni* RÁCZ, *Beresella* sp., *Praedonezella* sp., *Donezella* sp., *Mellporella* sp., *Gyroporella* sp.) (GULYÁS-KIS, in

press). *Fourstonella* sp. is a transient form between *F. fusiformis* (BRADY) and *F. irregularis* (MAMET & ROUX).

The algal fossil communities indicate the Bashkirian-Moskovian age. Dominating taxa are encrusting aoujgaliids (*Ungdarella*, *Komia*, *Petschoria*) and moravamminids (*Beresella*, *Dvinella*). *Anthracoporella* specimens (mostly in mounds) are also present in high number. Otherwise, well preserved dasyclads are rarely found in the Bükk (most of the dasyclads are displaced fragments). In the Velebit Mt. dasyclad taxa are present in high diversity and density due to the different paleoenvironments. We can make a conclusion that in the Bükk area during the Bashkirian and Moskovian platform environments with mud mounds and patch reefs were dominant, while in the Velebit Mt. in the same period lagoonal environments were more common (GULYÁS-KIS, in press).

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¹Eötvös Loránd University, Department of Palaeontology, Pázmány Péter sétány 1/C, H-1117 Budapest, Hungary; e-mail: gukicsal971@yahoo.co.uk

²University of Zagreb, Faculty of Science, Department of Geology, Horvatovac 102a, HR-10000 Zagreb; e-mail: jsremac@yahoo.com