First results of the pollen analytical investigation at Tata-Porhanyóbánya

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Introduction

The first palynological investigation of Tata-Porhanyóbánya was carried out in 1958. A 19 m long core was deepened into the travertine, the samples were analyzed at every 20 cm[1] and 19 pollen taxa were identified.

In May 2003 new pollen analytical research started at the locality. At this time we studied not the travertine itself, but the sediment which fills the hole between the two travertine layers. Eleven samples were taken for palynological investigation, seven from the northern wall (NP 1–7) and four from the southern part of the cave (SP 1–4).

The sampling was carried out based on the visible sedimentological changes. In the case of very thick units we have taken more samples from one layer.

Laboratory method

Because of the presumed low pollen concentration the maceration was started from 10 cm^3 soil. We followed the standard laboratory treatment after Ralska-Jasiewiczowa – Berglund[2] but considering to the big inorganic content of the samples the treatment was completed with the density separation technique elucidated by Zólyomi.[3]

Dating of the locality

The travertine was dated by Th-230/U-234 dating to 116–70 ka years.[4] According to this absolute age our locality could be dated based on the deep see isotope stages and the continental stratigraphy to the 5a-c isotopic stage, to the Early Weichselian, to the period of the Brörup and Odderade interstadial.

1 Járai-Komlódi 1964, 67–77.
2 Ralska-Jasiewiczowa–Berglund 1986, 455-484.
3 Zólyomi 1953, 367–430.
4 Hennig et al 1983, 1–29.