

# The use of nummulitic chert in the Middle Palaeolithic in Hungary

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## Introduction

Nummulites are unicellular organisms (foraminifers), typical for the Palaeogene shallow marine carbonate rocks in the Carpathian Basin. They are often present in rock-forming quantity in the Middle Eocene to lowermost Oligocene sediments of Transdanubian Central Range of Hungary and in southern Slovakia. Uncommon occurrences of *Nummulites*-bearing rocks are in Lower Miocene and younger conglomerates, which yield nummulitic chert pebbles of various colours (grey, brown or yellow), with striated and usually black cortex. Time, place and mode of silicification is an open question for the time being, since the siliceous variety of the rock is unknown from primary geological outcrops.

Some types of the pebbles can be distinguished easily macroscopically, but the majority of the pieces is covered by thick patina layer, that's why the original colour and texture of the stone cannot be observed. The pebbles generally consist of chalcidony, rarely opal and quartz; sometimes, when the rock is not completely silicified (e. g. the piece from Opatovská Nová Ves) primary quartz is also present in considerable quantity. During our recent studies several kinds of *Nummulites* (*N. millecaput*, '*N. striatus*' and '*N. perforatus*'), and other foraminifer genera (*Discocyclina*, *Asterigerina*, *Assilina*), a boring sponge (*Entobia*) were identified as well as remains of annelids (*Rotularia spirulea*, *Ditrupea*), molluscs, corals, *Crinoidea*, *Bryozoa*, echinoids and algae.<sup>1</sup>

The presence of nummulitic chert was first reported from Ipolytarnóc,<sup>2</sup> later from the gravel pits westward from Budapest (Budafok, Biatorbágy, Etyek),<sup>3</sup> from the Pest plain (Rákosszentmihály, Csömör, Fót, Mogyoród) and from Nógrád.<sup>4</sup> After the World War II it was found at several points in the Ipoly/Ipel' valley in Slovakia (Slovenské Ďarmoty, Dolinka, Ipel'ské Predmostie, Nenince).<sup>5</sup> Geological age

<sup>1</sup> Lajos Bartkó and M. Vaňová identified different Nummulitic species (*Nummulites millecaput*, *N. irregularis* var. *regulata*, and *N. millecaput millecaput*, *N. anomalus*, *N. chauvannesi*) and other foraminifer remains (*Assilina*, *Discocyclina*, *Globigerina*); *Ostrea*, *Crinoidea*, algae and Molluscs were also found – BARTKÓ 1939.; MIŠÍK 1969, 127.

<sup>2</sup> SZABÓ 1879. Recently this locality was discovered again: BARTKÓ 1985, 30., 59., II. ábra.

<sup>3</sup> SCHAFARZIK 1928, 10.; JASKÓ 1939, 122–123.

<sup>4</sup> BARTKÓ 1939, 58.

<sup>5</sup> MIŠÍK 1969, 127.; 1975, 99–101.