

MAMMAL DISCOVERY IN KUČLÍN DIATOMITE

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Abstract. The Kučlín diatomite has yielded a unique discovery of a Paleogene mammal. It is a partial skeleton (several thoracic and lumbar vertebrae, ribs and part of the pelvis). On the basis of the uncovered material, it is likely a palaeotherid; most probably a small species of *Propalaeotherium*.

■ Perissodactyla, Palaeotheriidae, Kučlín, Czech Republic, Late Eocene

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Introduction

The fossilized partial skeleton was discovered by the private collector Ivo Dolejš sometime around 1990. It was subsequently purchased by Ing. Jiří Vedral, who donated it to the National Museum in Prague in 1995.

The fragments of yellow-brown diatomite with remains of a skeleton were found on the property of J. Vedral, beneath the peak of Trupelník, north-northeast from Kučlín near Bílina. According to testimony by J. Vedral, the fossil was supposedly found in the upper part of the diatomite stratum, just above the tuffitic layer, but the precise location is not known. Based on the dating of the overlying basalts, the sediments that held the fossil have been dated into the upper Eocene (Bellon et al. 1998). It is the oldest known mammal fossil in the Czech Republic.

Several decades of activity in this locality have uncovered only this one fossil mammal remnant, and it has not yet been published or figured in any professional publication.

Materials and Methods

The specimen is stored in the collections of the National Museum in Prague (inv. no. Pa 24). Dimensions were measured with digital calipers, to an accuracy of 1 mm. Photographs were taken with an Olympus C-5050 camera.

Abbreviations: Lu – lumbar vertebrae, Th – thoracic vertebrae.

Description

The mosaic of 13 connected diatomite fragments contains part of a skeleton of a medium-sized mammal (text-

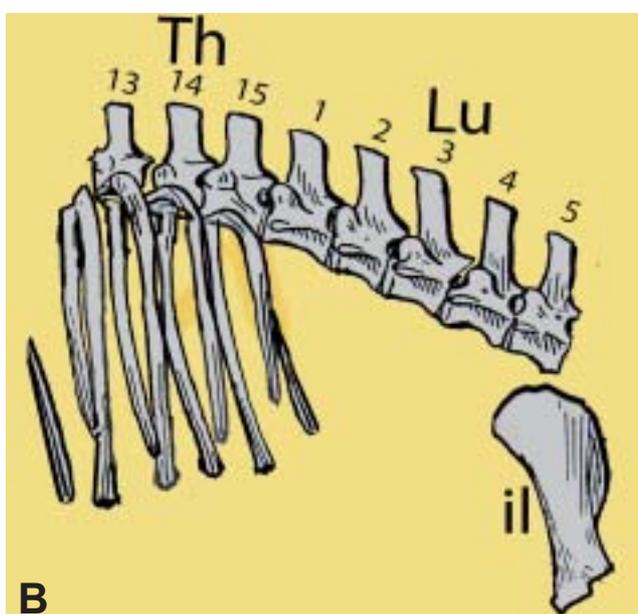
fig. 1A). The skeleton was probably complete and on the basis of the recovered fragments, the overall length of the animal is estimated at 60–80 cm (length of the measurable part of the spine, Th 13 – Lu 4, is approximately 134 mm). The left side of the skeleton of the specimen no. Pa 24 is exposed. The block found by the collector preserved only part of the thoracic and lumbar spine: thoracic vertebrae 13–15 and lumbar vertebrae 1–5. The lower left portion shows several indeterminate rib fragments. The lower right contains part of a pelvic bone.

Discussion and Conclusion

Since the preserved specimen does not contain the jaw or limb extremities, classification is rather uncertain. In light of the dimensions and vertebrae morphology, it is likely to be a smaller species of a Paleogene perissodactyle ungulate, a type of palaeotherid (Palaeotheriidae, Hippomorpha, Perissodactyla). It was a horse-like folivore, early in the development stage leading to the modern horse. During the Eocene, palaeotherids lived in North America and Eurasia (Savage and Russell 1983); the maximum distribution was in the middle Eocene. In this period there is documented expansion and abundance of large and small palaeotherid species, for example in the Paris Basin, or in Messel and Geiseltal (Franzen 2007). One smaller species (e.g. genus *Propalaeotherium*) is even a possible candidate in this case. The generally difficult taxonomy could be definitively determined only with a jaw or extremity.

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Text-fig. 1. A. Preserved part of Kučlín specimen No. Pa 24 (foto B. Ekrť); B. For comparison, a corresponding part of a Paleogene ungulate of the genus *Phenacodus* (Gregory 1951, modified). Abbreviations: il – ilium, Lu – lumbar vertebrae, Th – thoracic vertebrae.

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