ANNALES HISTORICO-NATURALES MUSEI NATIONALIS HUNGARICI
Volume 102 Budapest, 2010 pp. 205–210

Revision of significant recent and early Holocene bat data from Hungary (Mammalia: Chiroptera)

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Abstract – Bat remains from the Mélyvölgyi-kőfülke (southern Hungary) cave in 1946 were determined as specimens of Northern Bat (*Eptesicus nilssonii*) and Long-fingered Myotis (*Myotis capaccinii*). After the revision of the remains, the Northern Bat specimen proved to be a Barbastelle, and the Long-fingered Myotis proved to be a Natterer's Bat (*Myotis nattereri*). The second recent record of Northern Bat, which was found in 2000 in Szekszárd, proved to be a Savi's Pipistrelle (*Hypsugo savii*). With 5 figures.

Key words – *Eptesicus nilssonii*, *Myotis capaccinii*, new country records, early Holocene, faunistics.

INTRODUCTION

In the summer of 1946 Vértes and his team collected bat remains from the Mélyvölgyi-kőfülke cave in the Mecsek Mountains, southern Hungary (Vértes 1952). The bones were deposited in the Department of Geology and Paleontology of the Hungarian Natural History Museum (HNHM), and their age was determined as early Holocene. One of the remains was determined by Éhik as a Northern Bat (*Eptesicus nilssonii*) and another specimen from the collected material was identified as a Long-fingered Myotis (*Myotis capaccinii*). Beside the above publication of Vértes (1952) both species are represented by only single early Holocene records (Kordos 1981) dated back to 5000–8000 years B.P.

There were a few, mostly ambiguous, recent findings on the Northern Bat in Hungary, which were reviewed in detail by CSANÁDI (1998), who concluded that only the record of PAULOVICS (1998) from a cave near Szentgál can be held as acceptable. Since then only one new occurrence, represented by a mummified specimen found in a building in Szekszárd was reported by DOMBI & SOMOGYVÁRI (2003) (Fig. 1).

Because of the very low number of early Holocene and recent records any data on the occurrence of the above species have significant importance and therefore have been cited by subsequent authors (BOLDOGH *et al*. 2007, HAVRANEK 1962, SZATYOR 1995, 2006). Since the determination of fragmented remains can be problematic, we decided to revise these important data.

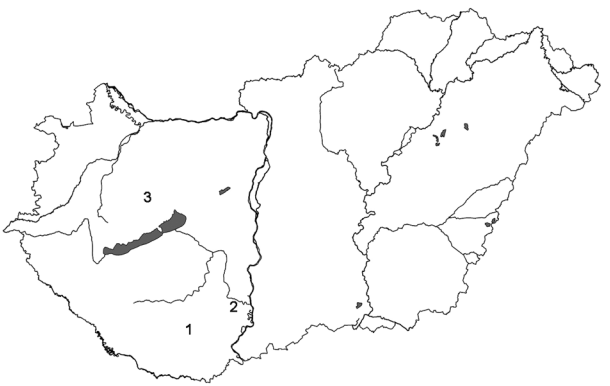
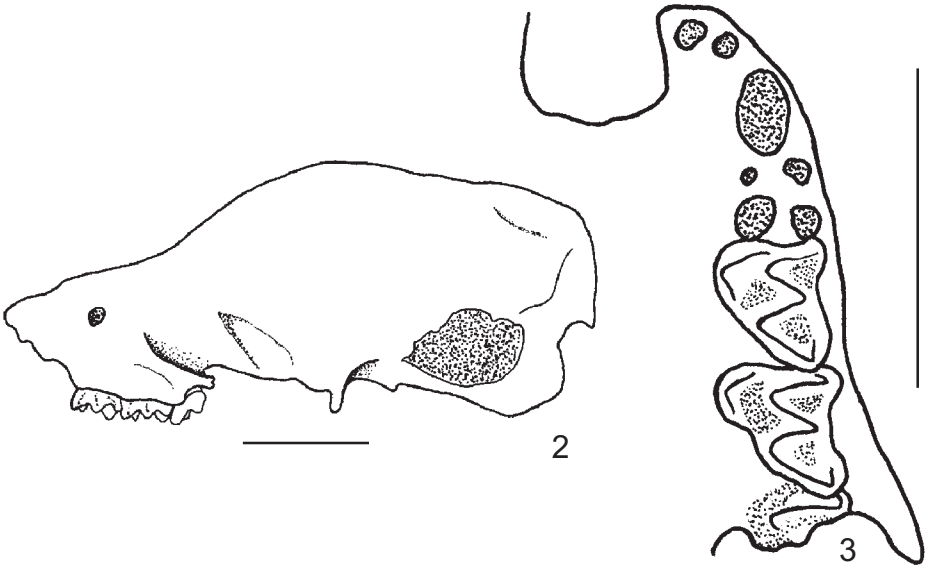


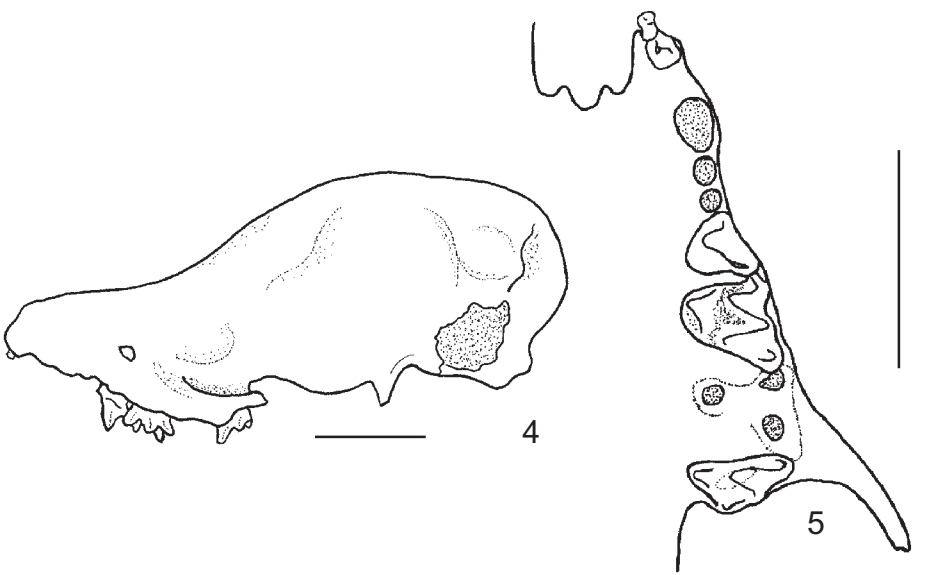
Fig. 1. Hungarian localities mentioned in the text. 1: Mélyvölgyi-kőfülke cave, Mecsek Mountains, 2: Szekszárd, Tolna County, 3: Szentgál, Veszprém County

RESULTS

In the course of the revision of the Mélyvölgyi-kőfülke cave material the specimen which was held to be a Northern bat (HNHM inventory number V.62.1160.) proved to be a Barbastelle (*Barbastella barbastellus*) (Figs 2–3) and the Long-legged bat (V.62.1164.) was re-identified as a Natterer's bat (*Myotis nattereri*) (Figs 4–5).



Figs 2–3. "*Eptesicus nilssonii*" specimen V.62.1160, 2 = lateral view of the skull, 3 = occlusal view of the left side of the rostrum. Scale = 3 mm



Figs 4–5. "*Myotis capaccinii*" specimen V.62.1164, 4 = lateral view of the skull, 5 = occlusal view of the left side of the rostrum. Scale = 3 mm

These two species were mist-netted in the place of the excavation in September 2009 (unpublished data). The Long-fingered Myotis is basically a Mediterranean species, which occurs almost exclusively in karst areas. The closest data of the species to Hungary was in a cave near Zagreb (DULIĆ 1963), but the species became extinct in this area, so the nearest colony is in the Matesica cave near Slunj, Croatia (HAMIDOVIĆ *et al*. 2006). There are no accepted recent records of this species in Hungary (BIHARI 2007), and only vagrant specimens might occur along the Danube or the Drava rivers. The Northern bat's main distribution area is in North Europe, but it occurs also south of Hungary in the Romanian Carpathians, the Rila Mountains in Bulgaria and in Croatia (HANÁK & HORÁČEK 1986, NAGY *et al*. 2005, PAVLINIĆ & TVRTKOVIĆ 2003). According to our present knowledge the species has only one confirmed recent sighting supported by photographic evidence (PAULOVICS 1998).

As the result of the revision of the skull and body remains of the proposed Northern Bat from Szekszárd the specimen proved to be a Savi's Pipistrelle (*Hypsugo savii*). This species became common in the area during the past few years (GÖRFÖL *et al*. 2007), but the specimen found in 2000 is one of the first findings in the city.

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Acknowledgements – We are very grateful to MIKLÓS ZÖRÉNYI (Paks) and MIHÁLY GASPARIK (HNHM) for making the specimens available for the study.

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