

First record of *Vespertilio murinus* in the Pilis Mts. (Hungary)

Dávid Kováts

Ministry of Rural Development, Kossuth Lajos tér 11, 1055 Budapest, Hungary; david.kovats@gmail.com

Abstract. Until recently, *Vespertilio murinus* has not been detected in the Pilis Mts. nor in the Dunazug region. Closest to the Pilis Mts., an injured individual was collected in Budapest, but the circumstances remain unknown. On 27 May 2011, a male *V. murinus* was mist-netted at the entrance of the Legény Cave (47° 42' N, 18° 51' E, 465 m a. s. l., Pilisszentlélek, Komárom-Esztergom Dist.), situated in the Pilis Landscape Protection Area (Duna-Ipoly National Park Directorate). Another individual (female) was caught at the same cave on 9 September 2011. These records represent the first evidence of *V. murinus* in the bat fauna of the Pilis and Dunazug Mts.; the number of known bat species has risen to 22.

Legény Cave, *Vespertilio murinus*, mist-netting, Pilis Mts., Hungary

Vespertilio murinus Linnaeus, 1758 occurs in temperate Eurasia; from the Alps and Scandinavia via the Caucasus and Iran to southern Siberia (Mitchell-Jones et al. 1999). Its natural habitats include mountains and forested areas, but it can be found also in cities. *V. murinus* is a very rare bat species in Hungary, although it has been recorded by mist-netting or from owl pellets as well as by findings of injured individuals (Topál 1954, 1959, 1976, Schmidt & Topál 1971, Vizslán & Szentgyörgyi 1992, Szentgyörgyi et al. 1994, Szentgyörgyi 1995, Endes 1988, Cserkész 1998, Estók 1998). Most observations of this species were made in ranges of the north-Hungarian mountains (Topál 1969, Dobrosi 1994, Bihari 1996, Gombkötő et al. 1996, Matis et al. 2002, Matis & Lesinsky 2002, Boldogh 2006, Bihari et al. 2007a); some records are known from the Bakony and Mecsek Mts. (Szatyor 1995) as well as from the Tisa River region (Szatyor 2000). In the last years two large colonies (a male colony of 39 bats and a nursery colony of 181 females) were discovered in mountains of the northeastern part of the country (Bihari et al. 2007b).

V. murinus has not been known from the Dunazug Mts., including the Gerecse, Pilis, and Budai Mts. Intensive research was carried out by the Budapest Bat Conservation Group and as a part of it, regular mist-netting was performed at caves of the Dunazug Mts. in 1992–1997. In this period the only available record of *V. murinus* was a finding of an injured individual in Budapest (details not available; Molnár 1997). Consequently, occurrence of this species was expected in the mountain areas surrounding the capital (Péter Paulovics pers. comm.).

The entire range of the Pilis Mts. is composed of limestone, and caves are found in the whole area. The precipitations vary between 600 and 700 mm and the average annual temperature is 10.0 °C. *Carici pilosae-Carpinetum*, *Quercus-Carpinetum*, and *Fago-Ornetum* are the most frequent forest associations. The mountains are not very rich in watercourses, but temporary streams and springs can be found throughout the area.

For catching of bats, a 9×2.5 m mist net was used and set up before sunset for the whole night at the entrance of the Legény Cave (47° 42' N, 18° 51' E, 465 m a. s. l., Komárom-Esztergom Dist.).

On 27 May 2011, an adult male *V. murinus* was netted at the cave (Fig. 1.). The forearm length (FA) of the individual was 45.0 mm and body mass (BM) 11.8 g. On 9 September 2011, another individual (female) of *V. murinus* was caught at the same cave (FA 43.7 mm; BM 17.0 g). During the former mist-netting session, five individuals of *Myotis emarginatus* were also captured, and on the latter occasion, the female of *V. murinus* was accompanied by one *Myotis emarginatus*, two *M. bechsteinii* and seven *M. nattereri*.

Vespertilio murinus has not been found in the Pilis Mts. nor in the nearby mountain areas before. These records represent the first evidence of *V. murinus* in the bat fauna of the Pilis and Dunazug Mts.; the number of known bat species has risen to 22. Moreover, *V. murinus* was for the first time caught by a mist net at a cave entrance in Hungary.



Fig. 1. The first mist-netted specimen of *Vespertilio murinus* in the Pilis Mts. (Legény cave).
Obr. 1. Prvý netovaný jedinec *Vespertilio murinus* v Piliškých horách (jaskyňa Legén).

Súhrn

Prvý nález večernice tmavej (*Vespertilio murinus*) v pohorí Piliš (Maďarsko). Správa informuje o prvom náleze večernice tmavej (*Vespertilio murinus*) v pohorí Piliš, odkiaľ (a z blízkeho pohoria Dunazug) dosiaľ nebol tento druh známy. Najbližší nález pochádza z Budapešti, kde bol nájdený zranený exemplár neznámeho pôvodu. 27. mája 2011 sa v rámci výskumu netopierov pri vchode do jaskyne Legén (47° 42' N, 18° 51' E, 465 m n. m., Pilisszentlélek, Komárňansko-ostrihomská župa) vo vrchovine Dunazug podarilo do siete chytiť jedného samca *V. murinus* (LAT=45,0 mm, G=11,8 g). 9. septembra 2011 sa na tej istej lokalite podarilo chytiť druhý exemplár (samica, LAT=43,7 mm, G=17,0 g). Nálezom *Vespertilio murinus* sa dosiaľ známy počet druhov netopierov v regióne zvýšil na 22. Ide o prvý odchyt *Vespertilio murinus* do siete pred vchodom do jaskyne v Maďarsku.

Acknowledgements

I wish to thank Csanád Hegyi, Ildikó Jakusovszki, Márton Juhász, Márton Paulin, Orsolya Kukoda, and Zoltán Hegyi for their help in the field. The Dunazug Bat Research Programme was financed by the Venic Nature Conservation Foundation and by additional support from the “Green-spring” (Ministry of Rural Development, Grant №. K-36-09-00145W).

References

- BIHARI Z., 1996: *Denevérhatározás és denevérvédelem*. Magyar Madártani és Természetvédelmi Egyesület, Budapest, 42 pp (in Hungarian).
- BIHARI Z., CSORBA G. & HELTAI M., 2007a: *Magyarország emlőseinek atlasza*. Kossuth Kiadó, Budapest, 360 pp (in Hungarian).
- BIHARI Z., ESTÓK P., GOMBKÓTÓ P. & PETROVICS Z., 2007b: A fehértorkú denevér magyarországi előfordulása és búvóhely preferenciája. Pp.: 77–79. In: MOLNÁR V. (ed.): *Az V. Magyar denevérvédelmi konferencia (Pécs, 2005. december 3–4.) és a VI. Magyar denevérvédelmi konferencia (Mártély, 2007. október 12–14.) kiadványa*. Csemete Természet- és Környezetvédelmi Egyesület, Szeged, 110 pp (in Hungarian).
- BOLDOGH S., 2006: The bat fauna of the Aggtelek National Park and its surroundings (Hungary). *Vespertilio*, **9–10**: 33–56.
- CSEKÉSZ T., 1998: Presence of bats in owl pellets collected in northern Hungary. *Hungarian Bat Research News*, **3**: 36–39.
- DOBROSI D., 1994: *A Denevérek Elterjedése és Védelme Magyarországon*. Magyar Denevérkutatók Baráti Körének Kiadványa, Budapest, 23 pp (in Hungarian).
- ENDES M., 1988: A tiszai Alföld denevérfaunájának vizsgálata. *Természettudományos Tájékoztató*, **1**: 62–67 (in Hungarian).
- ESTÓK P., 1998: The parti-coloured bat *Vespertilio murinus* in owl pellets from Hungary. *Hungarian Bat Research News*, **3**: 21–22.
- MOLNÁR Z., 1997: Bat-fauna examination in Pilis-, Visegrádi- and Gerecse Mountains 1992–97. Pp.: 26–33. In: MOLNÁR V., MOLNÁR Z. & DOBROSI D. (eds): *Az I. Magyar Denevérvédelmi Konferencia (Sarród, 1997. november 29.) kiadványa*. Magyar Denevérkutatók Baráti Köre, Budapest, 69 pp (in Hungarian).
- GOMBKÓTÓ P., BIHARI Z. & ESTÓK P., 1996: Az óriás korai denevér (*Nyctalus lasiopterus*) és fehértorkú denevér (*Vespertilio murinus*) újabb előfordulása Észak-Magyarország területén. *Denevérkutatás*, **2**: 38–39 (in Hungarian).
- MATIS Š. & LEŠINSKÝ G., 2002: Zimoviská netopierov v Slovenskom krase IV. *Vespertilio*, **6**: 229–230 (in Slovak).
- MATIS Š., PJEŇČÁK P., KÜRTHY A. & HAPL E., 2002: Prehľad letných nálezov netopierov (Chiroptera) v Národnom parku Slovenský kras. *Natura Carpatica*, **43**: 195–243 (in Slovak).
- MITCHELL-JONES A. J., AMORI G., BOGDANOWICZ W., KRYŠTUFEK B., REIJNDERS P. J. H., STUBBE M., THISSEN J. B. M., VOHRALÍK V. & ZIMA J., 1999: *The Atlas of European Mammals*. Academic Press, London, xi+484 pp.
- SCHMIDT E. & TOPÁL G., 1971: Denevérmaradványok magyarországi bagolyköpetekből. *Vertebrata Hungarica*, **12**: 93–102 (in Hungarian).
- SZATYOR M., 1995: The bat fauna of the caves in Mecsek (with Comparative and Complementary Purpose). *Hungarian Bat Research News*, **1**: 11–15.
- SZATYOR M., 2000: *Európa Denevérei*. Pro Pannónia Kiadói Alapítvány, Pécs.
- SZENTGYÖRGYI P., 1995: A baglyok denevérfogyasztásáról. *Calandrella*, **7**(1–2): 86–94 (in Hungarian).
- SZENTGYÖRGYI P., FÜGEDI L. & VIZSLÁN T., 1994: Adatok az Észak-magyarországi középhegység és elő terének kisméltfaunájához bagolyköpet vizsgálatok alapján. *Folia Historico-naturalia Musei Matraensis*, **19**: 193–200 (in Hungarian).

- TOPÁL G., 1954: A Kárpát-medence denevéreinek elterjedési adatai. *Annales Historico-Naturales Musei Nationalis Hungarici*, **5**: 471–483 (in Hungarian).
- TOPÁL G., 1959: Két ritka denevérfaj a Kárpát-medence faunájában. *Vertebrata Hungarica*, **1**: 89–102 (in Hungarian).
- TOPÁL G., 1969: *Magyarország Állatvilága – Fauna Hungariae XXII. kötet, 2. füzet. Denevérek – Chiroptera*. Akadémia Kaidó, Budapest, 81 pp (in Hungarian).
- TOPÁL G., 1976: New records of *Vespertilio murinus* (Linnaeus) and of *Nyctalus lasiopterus* (Schreber) in Hungary. *Vertebrata Hungarica*, **17**: 9–14.
- VIZSLÁN T. & SZENTGYÖRGYI P., 1992: A Sajó-Hernád-sík és a Sajó-völgy gerinces faunájáról. *Folia Historico-naturalia Musei Matraensis*, **17**: 199–208 (in Hungarian).

received on 17 November 2011