

Noteworthy bat records from Upper Mesopotamia, Turkey (Chiroptera)

Znaczące stwierdzenia nietoperzy z Górnej Mezopotamii, Turcja (Chiroptera)

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Abstract. New records of seven bat species were made during recent visits to SE Anatolia (Upper Mesopotamian biogeographic region). *Rhinolophus hipposideros*, *R. mehelyi*, *Myotis blythii*, *M. nattereri*, *M. emarginatus*, and *Miniopterus schreibersii* are here reported for the first time from the Turkish part of Upper Mesopotamia. The finding of *Myotis nattereri* significantly extends its distribution range in Turkey. Additional data are provided on external characters and measurements of *Taphozous nudiventris* – a rare species known from only one site in the country, discovered in 1997.

Key words. Anatolia, Chiroptera, distribution, *Taphozous nudiventris magnus*.

INTRODUCTION

According to published data, 37 species of bats (representing six families: Pteropodidae, Emballonuridae, Rhinolophidae, Vespertilionidae, Miniopteridae, and Molossidae) have been reported from Turkey so far (BENDA & HORÁČEK 1998, SACHANOWICZ et al. 1999, BENDA & TSYTSULINA 2000, SPITZENBERGER et al. 2002, 2003, BENDA et al. 2003). Of them only 8 species were found in Upper Mesopotamia (BENDA & HORÁČEK 1998, SACHANOWICZ et al. 1999, KARATAŞ et al. 2003), which is a biogeographic region situated in SE Anatolia, along the border with Syria. The region covers the whole or a part of the Kilis, Gaziantep, Ş. Urfa, Mardin and Cizre provinces. The present state of knowledge on the bat fauna of Upper Mesopotamia is still not adequate to its zoogeographical importance as a part of transition zone between the Euro- and Afro-Mediterranean types of the bat fauna (HORÁČEK et al. 2000).

Herein we present new, noteworthy records of bats from Upper Mesopotamia made during visits in 1997, 2002 and 2004. Additional morphological data are provided on *T. nudiventris magnus*, recently noted from a single site within the region. The measurements were taken in a standard way (e.g. HARRISON & BATES 1991). The vouchers are deposited in the senior author's collection at the Zoology Department Museum of the Niğde University (ZDNU).

NOTES ON THE SPECIES RECORDED

***Taphozous nudiventris magnus* von Wettstein, 1913**

Nizip (Gaziantep Prov.), rocky fissure in the vicinity of the Mağaracık village (455 m a. s. l.) (Fig. 1). The locality, where a colony of *T. nudiventris* was discovered on 19 August 1997 (the date 19 September was erroneously given by SACHANOWICZ et al. 1999), was visited twice in 2002. On 2 August 2002, approx. 15 bats emerged from the crevice at dusk and others left in the roost (probably juveniles) could be heard continuously. An adult lactating ♀ (Figs. 2, 3) was mist-netted in front of the crevice. Its pelage was ashy-grey without any brown colour on the back, unlike that of juveniles caught in 1997. On 27 September 2002, altogether 8 ♂♂ and 2 subadult ♀♀ were captured and measured (Table 1). On the second visit, bats emerged from the roost 50–60 minutes after sunset. Surprisingly, an individual of the little owl (*Athene noctua*) was mist-netted at dusk while leaving the crevice inhabited by bats. No its pellets or faeces were found at the site, suggesting rather accidental character of the owl's roost. The northernmost records of

Table 1. External, cranial measurements (mm) and weight (g) of *Taphozous nudiventris magnus* (2 ♀♀ and 7 ♂♂) from the colony near the Mağaracık village (Figs. 1, 2). Forearm length is given for 13 individuals, including the specimens measured in 1997

Tabela 1. Wymiary zewnętrzne i czaszki (mm) oraz masa ciała (g) *Taphozous nudiventris magnus* (2 ♀♀ and 7 ♂♂), Mağaracık. Długość przedramienia podano dla 13 osobników, włącznie z pomierzonymi w roku 1997

dimension	n	mean	range (min–max)	SD
head and body length	9	142.00	136.0–146.0	3.71
tail length	9	37.56	34.5–41.0	2.16
hind foot length	9	18.33	15.0–23.0	3.03
ear length	9	25.83	23.5–28.0	1.35
tragus length	9	9.22	8.0–10.0	0.71
forearm length	13	80.81	77.0–84.2	2.10
tibia length	9	33.44	31.5–35.0	1.01
phalang I length	9	10.56	29.5–11.5	0.95
1st segment of the phalang III length	9	30.83	29.5–32.0	1.00
2nd segment of the phalang III length	9	33.39	32.0–34.0	0.70
wingspan	9	557.78	530.0–570.0	15.43
calcar length	6	23.00	20.5–25.0	1.52
greatest length of skull	3	31.95	31.8–32.1	0.21
condylocanine length	3	27.25	26.7–27.8	0.78
condylobasal length	3	26.15	25.8–26.5	0.49
mandibular length	3	23.15	22.8–23.5	0.49
C-M ₃ length	3	14.10	14.0–14.2	0.14
C-M ³ length	3	12.50	12.3–12.7	0.28
rostral breadth	3	7.30	7.1–7.5	0.28
interorbital constriction width	3	9.00	9.0–9.0	0.00
zygomatic breadth	3	18.15	18.0–18.3	0.21
mastoidal breadth	3	16.35	16.3–16.4	0.07
braincase breadth	3	12.45	12.3–12.6	0.21
height of skull	3	13.55	13.3–13.8	0.35
weight	9	74.85	50.0–100.0	18.42

T. nudiventris from northern Syria, Iraq and Iran (DEBLASE 1980, HARRISON & BATES 1991, EBENAU 1996, BENDA et al. 2006) were recently supplemented by the Turkish locality (SACHANOWICZ et al. 1999). According to the analysis of morphological and cranial characters, only two subspecies or most likely separate species should be considered: the larger form *T. n. magnus* restricted to Mesopotamia and adjacent areas, and smaller *T. n. nudiventris*, widely distributed from West Africa to Burma (BENDA et al. 2006).

***Rhinolophus hipposideros* (Borkhausen, 1797)**

Viranşehir (Ş. Urfa Prov.), an artificial cave in the Karataş village. On 24 September 2002 – 1 adult ♂ netted in the cave. The species does not seem to be rare, until now it has been reported from almost all regions of Turkey, except for Upper Mesopotamia (BENDA & HORÁČEK 1998).

***Rhinolophus mehelyi* Matschie, 1901**

Viranşehir (Ş. Urfa Prov.), 24 September 2002 – 1 adult ♂ found in a cave in the vicinity of Karataş village. The characters given by FELTEN et al. (1977) and HARRISON & BATES (1991), e.g. shape of the lancet and of the connecting process were used for species determination. This rare species is known only from one locality in south-eastern Anatolia (BENDA & HORÁČEK 1998).

***Myotis blythii* (Tomes, 1857)**

Nizip (Gaziantep Prov.), small artificial caves in the vicinity of the Mağaracık village. On 19 August 1997 – ca. 30 individuals, on 2 August 2002 – ca. 30 bats observed (3 adult, post lactating ♀♀, a juvenile ♀, 2 adult ♂♂ and a juvenile ♂ were captured; Fig. 4). On 27 September 2002 – 10 adults in another artificial cellar nearby. On 5 August 2002 – 1 adult ♂ with an exceptionally short forearm (53.9 mm) was mist-netted, along with several *P. kuhlii*, in a coppice near the stream at the same locality. *M. blythii* is one of the commonest bats in Turkey, reported from many localities throughout the country except for Upper Mesopotamia (BENDA & HORÁČEK 1998).

***Myotis nattereri* (Kuhl, 1817)**

Nizip (Gaziantep Prov.), small ruins in the vicinity of the Mağaracık village. On 19 August 1997 – 1 adult ♂ in a crevice of a ceiling, 2 August 2002 – 2 adult ♀♀ (Fig. 5), and 27 September 2002 – 1 adult ♀ in the same roost. On 19 August 1997 – 1 adult ♀ was mist-netted at the entrance of a small artificial cave, ca 200 m from the ruins. *M. nattereri* seems to be rare in Turkey and is known from 17 localities in Thrace, the Mediterranean coast, and NE Anatolia (BENDA & HORÁČEK 1998). There is also one record from Bahçe (Osmaniye province) on the eastern Levantine coast (AKTAŞ & HASBENLİ 1994) not mentioned by BENDA & HORÁČEK (1998). The new locality from Upper Mesopotamia, along with recent records from Syria, connects the range patches of *M. nattereri* between SW and NE Anatolia and Israel (HARRISON & BATES 1991, BENDA et al. 2006).

***Myotis emarginatus* (Geoffroy, 1806)**

On 23 June 2004, a colony of 100 females with approx. three-weeks-old juveniles was found in the Çakmaklı Cave near the Fericek village of Musabeyli (Kilis Prov.). In Turkey, the Geoffroy's bat was reported from 30 localities situated in the Mediterranean and Aegean coastal zones and the Marmara region (BENDA & HORÁČEK 1998, KARATAŞ & ÖZGÜL 2003).



Figs. 1–5. Bats from Upper Mesopotamia of Turkey (all photos by K. SACHANOWICZ). 1. Nursery roost of *Taphozous nudiventris* near the Mağaracık village. 2. Adult female of *T. nudiventris*. 3. Dorsal view of an adult female of *T. nudiventris*. 4. Portrait of *Myotis blythii* from near the Mağaracık Village. 5. Adult female of *Myotis nattereri*.

Rys. 1–5. Nietoperze Górnej Mezopotamii, Turcja (wszystkie zdjęcia K. SACHANOWICZ). 1. Kryjówka kolonii rozrodczej *Taphozous nudiventris*, Mağaracık. 2. Dorosła samica *T. nudiventris*. 3. Strona grzbietowa dorosłej samicy *T. nudiventris*. 4. Portret *Myotis blythii*, Mağaracık. 5. Dorosła samica *Myotis nattereri*.

***Miniopterus schreibersii* (Kuhl, 1817)**

On 25 September 2002, a colony of ca. 1000 individuals was observed in a large artificial cave in an ancient settlement system in the centre of Mardin. A male was netted in a cave near Akbez (border of the Hatay and Kilis Prov.) on 22 June 2004. With 58 records, it is one of the most frequent bats in Turkey. Although reported from almost the whole country, it was not known from Upper Mesopotamia (BENDA & HORÁČEK 1998). Recent genetic studies, supplemented with external measurements, elucidated that two subspecies or most likely separate species are distributed allopatrically in Turkey: *M. s. schreibersii* (Kuhl, 1817) in northern, western and south-western coastal parts of Anatolia and *M. s. pallidus* Thomas, 1907 in central and south-eastern Anatolia (FURMAN et al., in press).

CONCLUSIONS

The number of bat species known from the Turkish part of Upper Mesopotamia has increased to 14 (ca. 38% of the Turkish bat fauna). BENDA & HORÁČEK (1998) listed 6 species: *Rhinolophus ferrumequinum*, *Myotis myotis*, *Hypsugo savii*, *Pipistrellus kuhlii*, *Otonycteris hemprichii*, and *Tadarida teniotis*. SACHANOWICZ et al. (1999) and KARATAŞ et al. (2003) added *Taphozous nudiventris* and *Myotis capaccinii*. Herein we report further six species new for Upper Mesopotamia: *Rhinolophus hipposideros*, *R. mehelyi*, *Myotis blythii*, *M. nattereri*, *M. emarginatus* and *Miniopterus schreibersii*. The finding of *M. nattereri* significantly extends its distribution range in Turkey (BENDA & HORÁČEK 1998). In our opinion, next studies in the area should reveal the occurrence of further bat species, including elements of the Saharo-Sindian mammal fauna new for the country e.g. *Asellia tridens* (Geoffroy, 1813), *Eptesicus bottae* (Peters, 1869), and probably bats of the family Rhinopomatidae.

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STRESZCZENIE

Nowe stwierdzenia siedmiu gatunków nietoperzy zebrano podczas ostatnich wizyt w SE Anatolii (region biogeograficzny Górnej Mezopotamii). *Rhinolophus hipposideros*, *R. mehelyi*, *Myotis blythii*, *M. nattereri*, *M. emarginatus* i *Miniopterus schreibersii* wykazano po raz pierwszy z tureckiej części Górnej Mezopotamii. Regionalne stanowisko *M. nattereri* znacząco powiększa zasięg tego gatunku w Turcji. Podano uzupełniające dane o cechach zewnętrznych i wymiarach *Taphozous nudiventris* – rzadkiego gatunku znanego tylko z jednego, odkrytego w 1997, stanowiska w Turcji.

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