

First record of a mole in Syria (Soricomorpha: Talpidae: *Talpa*)

První náález krtka v Syrii (Soricomorpha: Talpidae: *Talpa*)

Petr BENDA^{1,2} & Ján OBUCH³

¹ Department of Zoology, National Museum (Natural History), Václavské nám. 68, CZ–115 79 Praha 1, Czech Republic; petr_benda@nm.cz

² Department of Zoology, Faculty of Science, Charles University in Prague, Viničná 7, CZ–128 44 Praha 2, Czech Republic

³ Botanical Garden, Comenius University, SK–038 15 Blatnica, Slovakia; obuch@rec.uniba.sk

received on 30 November 2009

Abstract. A right humerus of a mole (*Talpa* sp.) was found in *Tyto alba* pellets collected near the castle ruins of Qala'at Salah ad Din, western Syria (Al Lathiqiyeh Prov., 35° 36' N, 36° 03' E), on 30 June 1998. Considering biogeographic reasoning, the bone is likely to belong to *T. davidiana*, a species known to occur in southern and south-eastern Turkey and western Iran. The finding represents the first Recent record of a member of the Talpidae family in Syria as well as in the Arabian peninsula.

Key words. *Talpa davidiana*, distribution, Syria.

According to the current knowledge (HUTTERER 2005), three to four species of moles (Talpidae Fischer, 1814) inhabit various parts of the Middle East; *Talpa caucasica* Satunin, 1908, *T. davidiana* (Milne-Edwards, 1884), *T. levantis* Thomas, 1906 and possibly also *T. caeca* Savi, 1822.

All Middle Eastern mole species occur in Mediterranean habitats in the northern part of the region. *Talpa caucasica* is known only from a limited area of humid forests in north-eastern Turkey (KRYŠTUFEK & VOHRALÍK 2001) and north-western Iran (KRYŠTUFEK & BENDA 2002). *T. levantis* shows the widest distribution among moles in the Middle East (KRYŠTUFEK 2001), it is known from the Pontic region of Turkey, Hyrcanian region of north-western Iran and two isolated records were reported also from the Armenian Highlands (eastern Turkey, western Iran). Records of smaller moles identified as '*T. cfr. caeca*' by KRYŠTUFEK & VOHRALÍK (2001) were made in the Marmara region of north-western Anatolia. *T. davidiana* is the only endemic mole in the Middle East; its records are known from relatively arid regions adjacent to northern Mesopotamia in southern and south-eastern Turkey (Gaziantep, Bitlis and Hakkari Provinces) and western Iran (Kordestan Prov.) (KRYŠTUFEK et al. 2001). Although TCHERNOV (1994) reviewed fossil records of moles from two sites in northern Israel, no Recent records have been known from Arabia, i.e. from Syria and Iraq, and the regions lying southwards (HARRISON & BATES 1991).

A right humerus of a mole (*Talpa* sp.) was found in a small sample of fresh *Tyto alba* pellets containing remains of 151 prey individuals, including 44 mammal specimens (OBUCH & BENDA 2009). The pellets were collected in a small cave in a canyon below the castle ruins of Qala'at Salah ad Din, western Syria (Al Lathiqiyeh Prov., 35° 36' N, 36° 03' E, ca. 370 m a. s. l.) on 30 June 1998, leg. by J. OBUCH. The finding represents the first Recent record of a member of the Talpidae family in Syria as well as in the Arabian peninsula *sensu* HARRISON & BATES (1991). The record represents the third new mammal species for Syria discovered thanks to owl pellets analysis during the last few years; HUTTERER & KOCK (2002) reported the first record of *Crocidura katinka* Bate, 1937 from pellets collected at Halabiyeh (C Syria)

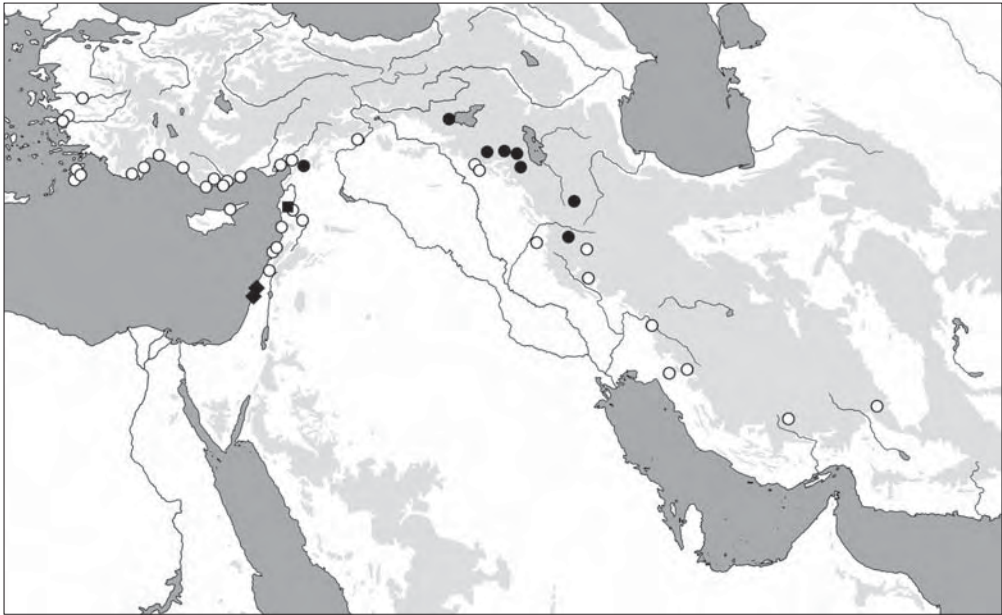


Fig. 1. A map of the Middle East showing sites of the records of *Talpa davidiana* (closed circles) and *Eptesicus anatolicus* (open circles), two mammal endemics of the region. Position of the new mole record from western Syria is denoted by a closed square, position of the fossil records from Israel by closed diamonds.

Obr. 1. Mapa Blízkého východu s vyznačenými místy nálezů krtka Davidova (*Talpa davidiana*) (plné kroužky) a netopýra anatolského (*Eptesicus anatolicus*) (prázdné kroužky), dvou endemických druhů savců oblasti. Posice nového nálezu krtka v západní Syrii je naznačena plným čtvercem, lokalizace fossilních nálezů v Izraeli plnými kosočtverci.

and Qala'at Sukkara (NE Syria) and SHEHAB et al. (2006) the first record of *Arvicola terrestris* (Linnaeus, 1758) from Jub Al-Ghar, 4 km NE of Slinfeh, NW Syria.

Measurements (taken according to GRULICH 1970: 29, Abb. 4) of the mole humerus from Syria are as follows: length 12.25 mm; largest width 8.73 mm; least width 3.11 mm. The bone is deposited in the collection of the National Museum in Prague (NMP 92563). Since no data concerning the postcranial measurements of the Middle Eastern populations of moles are available (with the exception of pelvis), see LAY (1965), GRULICH (1982), KRYŠTUFEK & VOHRALÍK (2001), and/or KRYŠTUFEK et al. (2001), only tentative species identification of the Syrian finding could be made, based on biogeographical reasoning.

The nearest record of a mole to the new locality in Syria is reported from southern Turkey, some 150 km to NNE, from the classical site of Meydanekbes (= Akbez) on the present Turkish-Syrian border, the type locality of *Scaptochirus davidianus* Milne-Edwards, 1884 (= *Talpa davidiana*). Another mole locality lies at Tatvan, further 530 km to ENE from Akbez, an area of sympatric occurrence of *T. davidiana* and *T. levantis* (KRYŠTUFEK & VOHRALÍK 2001). While *T. levantis* reaches there one of the southernmost points of its distribution (KRYŠTUFEK 2001), for *T. davidiana* Tatvan represents the northernmost one (KRYŠTUFEK et al. 2001; Fig. 1). The known distribution range of *T. davidiana* resembles the range of another endemic mammal of the Middle East, the Anatolian serotine *Eptesicus anatolicus* Felten, 1971. This bat occurs along

the southern slopes of the Taurus and Zagros Mts. from western Turkey to northern Iraq and western and southern Iran and also along the Levantine Mts. from Hatay to western Syria and Lebanon (for Lebanese records see HORÁČEK et al. 2008, for Cypriot record see BENDA et al. 2007, for other data see the review of the species' distribution by BENDA et al. 2006). The distribution range along the northern outline of the Fertile Crescent is common for both species, the bat and the mole (Fig. 1), and thus implies a natural character of the presence of *T. davidiana* in Syria, as our record suggests. Moreover, KRYŠTUFEK & VOHRALÍK (2005) revised the BATE's (1937) Upper Pleistocene (Mousterian) finding of a mole from the Tabun Cave, Mt. Carmel, Israel, originally described as *Talpa chthonia* Bate, 1937, and found it to represent *T. davidiana*. The new record from Syria connects the Levantine sites of evidence of *T. davidiana*, the Pleistocene ones (see TCHERNOV 1994 for a review) and the Recent one (Fig. 1), and perhaps represents the second Recent evidence of the nominotypical (Levantine) form of this species (see KRYŠTUFEK & VOHRALÍK 2005: 234) and its first record after description some 120 years ago (MILNE-EDWARDS 1884).

To be concluded, we tentatively consider the mole record from Syria to belong to *Talpa davidiana*. However, such a conclusion should be confirmed by a record of an individual which would enable doubtless species identification.

The contribution was prepared with a support of the Ministry of Culture of the Czech Republic (grants DE06P04OMG008 and MK00002327201).

SOUHRN

V čerstvých vývrzcích sovy pálené (*Tyto alba*) sebraných v blízkosti zříceniny hradu Salahadin v západní Syrii 30. června 1998 (provincie Latakia, 35° 36' s. š., 36° 03' v. d.) byla nalezena pravá kost pažní (humerus) krtka (*Talpa* sp.). S ohledem na biogeografické souvislosti náleží kost s největší pravděpodobností krtku Davidovu (*Talpa davidiana*), jehož dosud známý současný areál rozšíření zahrnuje jižní a jihovýchodní Turecko a západní Iran, fosilní nálezy jsou známy z Israele (obr. 1). Nález nepochybně představuje první recentní evidenci výskytu příslušníka čeledi krtkovitých (Talpidae), resp. rodu *Talpa*, v Syrii a na celém Arabském poloostrově.

REFERENCES

- BATE D. M. A., 1937: New Pleistocene mammals from Palestine. *The Annals and Magazine of Natural History* (Series 10), **20**: 397–400.
- BENDA P., ANDREAS M., KOCK D., LUČAN R. K., MUNCLINGER P., NOVÁ P., OBUCH J., OCHMAN K., REITER A., UHRIN M. & WEINFURTOVÁ D., 2006: Bats (Mammalia: Chiroptera) of the Eastern Mediterranean. Part 4. Bat fauna of Syria: distribution, systematics, ecology. *Acta Societatis Zoologicae Bohemicae*, **70**: 1–329.
- BENDA P., HANÁK V., HORÁČEK I., HULVA P., LUČAN R. & RUEDI M., 2007: Bats (Mammalia: Chiroptera) of the Eastern Mediterranean. Part 5. Bat fauna of Cyprus: review of records with confirmation of six species new for the island and description of a new subspecies. *Acta Societatis Zoologicae Bohemicae*, **71**: 71–130.
- GRULICH I., 1970: Zur Variabilität bei *Talpa caeca* Savi im Kanton Tessin, Schweiz (Insectivora, Familie Talpidae). *Acta Scientiarum Naturalium Academiae Scientiarum Bohemoslovaca Brno, s. n.*, **4**(10): 1–48.
- GRULICH I., 1982: Zur Kenntnis der Gattungen *Scaptochirus* und *Parascaptor* (Talpini, Mammalia). *Folia Zoologica*, **31**: 1–20.
- HARRISON D. L. & BATES P. J. J. 1991: *The Mammals of Arabia. Second Edition*. Harrison Zoological Museum, Sevenoaks, 354 pp.
- HORÁČEK I., BENDA P., SADEK R., KARKABI S., ABI-SAID M., LUČAN R., HULVA P. & KARANOUEH R., 2008: Bats of Lebanon. State of knowledge and perspectives. *Al-Ouat' Ouate, Revue Libanaise de Speleologie et de Karstologie, n. s.*, **14**: 52–67.

- HUTTERER R., 2005: Order Soricomorpha. Pp.: 220–311. In: WILSON D. E. & REEDER D. M. (eds.): *Mammal Species of the World. A Taxonomic and Geographic Reference. Third Edition. Volume 1*. The John Hopkins University Press, Baltimore, xxxviii+743 pp.
- HUTTERER R. & KOCK D., 2002: Recent and ancient records of shrews from Syria, with notes on *Crocidura katinka* Bate, 1937 (Mammalia: Soricidae). *Bonner Zoologische Beiträge*, **50**: 249–258.
- KRYŠTUFEK B., 2001: The distribution of the Levant mole, *Talpa levantis*. *Zoology in the Middle East*, **23**: 17–21.
- KRYŠTUFEK B. & BENDA P., 2002: The Caucasian mole *Talpa caucasica* – a new mammal for Iran. *Mammalian Biology*, **67**: 113–116.
- KRYŠTUFEK B. & VOHRALÍK V., 2001: *Mammals of Turkey and Cyprus. Introduction, Checklist, Insectivora*. Zgodovinsko društvo za južno Primorsko, Koper, 140 pp.
- KRYŠTUFEK B. & VOHRALÍK V., 2005: *Mammals of Turkey and Cyprus. Rodentia I: Sciuridae, Dipodidae, Gliridae, Arvicolinae*. Univerza na Primorskem & Zgodovinsko društvo za južno Primorsko, Koper, 292 pp.
- KRYŠTUFEK B., SPITZENBERGER F. & KEFELIOĞLU H., 2001: Description, taxonomy, and distribution of *Talpa davidiana*. *Mammalian Biology*, **66**: 135–143.
- LAY D. M., 1965: A new species of mole (genus *Talpa*) from Kurdistan Province, western Iran. *Fieldiana, Zoology*, **44**: 227–230.
- MILNE-EDWARDS A., 1884: Sur la classification des Taupes de l'ancien continent. *Comptes Rendus des Séances de l'Académie des Sciences*, **99**(26): 1141–1143.
- OBUCH J. & BENDA P., 2009: Food of the barn owl (*Tyto alba*) in the Eastern Mediterranean. *Slovak Raptor Journal*, **3**: 41–50.
- SHEHAB A. H., MAMKHAIR I. H. & AMR Z. S., 2006: Remains of the water vole, *Arvicola terrestris* (Linnaeus, 1758) (Microtinae, Rodentia), from north-western Syria. *Zoology in the Middle East*, **37**: 111–113.
- TCHERNOV E., 1994: New comments on the biostratigraphy of the Middle and Upper Pleistocene of the southern Levant. Pp.: 333–350. In: BAR-YOSEF O. & KRA R. S. (eds.): *Late Quaternary Chronology and Paleoclimates of the Eastern Mediterranean*. Radiocarbon, Tucson, 371 pp.