

## On the taxonomy and distribution of the genus *Maccevethus* (Hemiptera: Heteroptera: Rhopalidae)

PETR KMENT<sup>1</sup> & PETR BAŇAŘ<sup>2</sup>

<sup>1</sup> Department of Entomology, National Museum, Kunratice 1, CZ-148 00 Praha 4, Czech Republic;  
e-mail: sigara@post.cz

<sup>2</sup> Department of Entomology, Moravian Museum, Hvězdoslavova 29a, CZ-627 00 Brno-Slatina,  
Czech Republic; e-mail: petrbanar@seznam.cz

KMENT P. & BAŇAŘ P. 2010: On the taxonomy and distribution of the genus *Maccevethus* (Hemiptera: Heteroptera: Rhopalidae). *Acta Musei Moraviae, Scientiae biologicae* (Brno) **95(1):** 15–47. – Material of the genus *Maccevethus* Dallas, 1852 preserved in the collections of the National Museum, Prague and the Moravian Museum, Brno is revised. We record the syntopic occurrence of *Maccevethus errans* (Fabricius, 1794) and *M. caucasicus* (Kolenati, 1845) *stat. restit.* in Portugal, supporting species status for the latter taxon. In the case of *M. corsicus corsicus* Signoret, 1862 and *M. corsicus persicus* Jakovlev, 1882, we prefer to retain subspecies status for the time being. The following new or confirmed records are provided: *Maccevethus caucasicus* from Bosnia and Herzegovina and Portugal, *M. errans* from Portugal, *M. corsicus corsicus* from Montenegro and Syria and *M. corsicus persicus* from Afghanistan. Based on a re-examination of published records, *M. corsicus corsicus* is excluded from the fauna of Slovakia (and Central Europe). *Maccevethus corsicus persicus* is excluded from the fauna of Iraq. Additional corrections to the published records of *M. caucasicus* and *M. corsicus corsicus* from Cyprus, Iran, Israel, and Turkey are made. The distribution of *M. caucasicus* in Slovakia is mapped, and habitus photographs and drawings of the parameres of specimens from various countries are provided.

**Keywords.** Heteroptera, Rhopalidae, *Maccevethus*, taxonomy, faunistics, Palaearctic Region

### Introduction

The genus *Maccevethus* Dallas, 1852 is currently classified in the family Rhopalidae, subfamily Rhopalinae, and either the tribe Maccevethini (CHOPRA 1967, SCHAEFER & CHOPRA 1982, DAVIDOVÁ-VILÍMOVÁ *et al.* 2000, VILÍMOVÁ & ROHANOVÁ 2010) or the tribe Rhopalini *sensu lato* (PUTSHKOV & KERZHNER 1983, PUTSHKOV 1986, DOLLING 2006). *Maccevethus* is a small genus containing true bugs of rather uniform morphology but conspicuous intraspecific colour variation, a fact that has lent a considerable measure of confusion to its taxonomy in the past. A basic revision was published by JOSIFOV (1966), who concentrated upon the shape of parameres as the only reliable distinguishing character in this genus and recognized four species: *M. errans* (Fabricius, 1794), *M. caucasicus* (Kolenati, 1845), *M. persicus* Jakovlev, 1882, and *M. lutheri* Wagner, 1953 (= *M. corsicus* Signoret, 1862 *nomen oblitum*). Although JOSIFOV's (1966) work was widely accepted, the species or subspecies status of the taxa included became subject to further discussions and controversy (PUTSHKOV & KERZHNER 1983, KERZHNER 1998 *versus* MOULET 1994, 1995) (see also Discussion). All the species of this

genus inhabit Mediterranean biotopes, the steppes and semi-deserts of the Western and Central Palaearctic Region, from Portugal and Morocco in the west to Afghanistan, north-western China and Mongolia in the east, but are absent from the Arabian Peninsula (e.g., DOLLING 2006). All the members of the genus are unspecialized phytophages, feeding e.g. on *Asterothamnus centrali-asiaticus*, *Carduus bourgeanii*, *C. nutans*, *C. pycnocephalus*, *Crupina vulgaris*, *Echinops ritro*, *Mikania* (= *Phaeopappus*) *trinervis* (Asteraceae), *Eryngium campestre* (Apiaceae), *Stachys annuus* (Lamiaceae), *Crucianella angustifolia* (Rubiaceae), and others (MOULET 1995; PUTSHKOV 1962, 1986; RIBES *et al.* 1997; CANDAN *et al.* 2004).

In this paper we present the results of our (re-)examination of *Maccevethus* material preserved mainly in the collections of the National Museum, Prague and the Moravian Museum, Brno. These results allow us to present some new faunistic records of the species, correct some of the previous published misidentifications, and in addition to discuss the variability and taxonomic status of the taxa included.

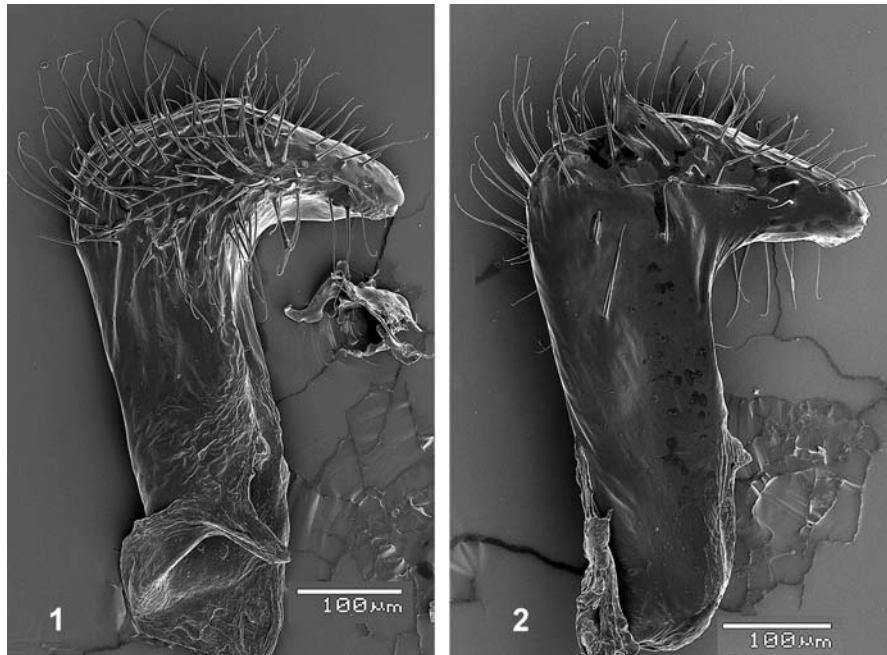
### Material and methods

The synonymy given below follows the Palaearctic Catalogue by DOLLING (2006). The material examined is deposited in the following collections:

HNHM .....	Hungarian Museum of Natural History, Budapest, Hungary
MMBC .....	Moravian Museum, Brno, Czech Republic
MMHC .....	Marion Mantič Collection, Hlučín-Bobrovníky, Czech Republic
NMPC .....	National Museum, Prague, Czech Republic
PSPC .....	The Pavel Štys Collection, Department of Zoology, Charles University, Prague, Czech Republic
ZMOC .....	The Zdeněk Malinka Collection, Opava, Czech Republic

Additional information about the localities and collecting circumstances of the material gathered by expeditions of the National Museum, Prague and J. Klapperich may be found in the following papers: Turkey (1947) (HOBERLANDT & TÁBORSKÝ 1949), Iran (1970, 1973, 1977) (HOBERLANDT 1974, 1981, 1983), and Afghanistan (1952–1953) (KLAPPERICH 1954). In “Material examined”, only previous identifications by Pierre Moulet are noted; published identifications by L. Hoberlandt and J. L. Stehlík are revised in Table 1 (Appendix). Only the males examined are listed below, females, since indistinguishable, are omitted (with the exception of Hungary and Slovakia, where only *M. caucasicus* occurs).

Scanning electron microscope (SEM) micrographs were prepared in the Laboratory of Electron Microscopy of the Biological Section of Charles University, Prague using a JEOL 6380 LV scanning electron microscope. Prior to SEM examination, the specimens were coated with gold.



**SEM 1–2.** Paramere of *M. corsicus corsicus* Signoret, 1862, ♂ from France, Sète (1 – outer face, 2 – inner face).

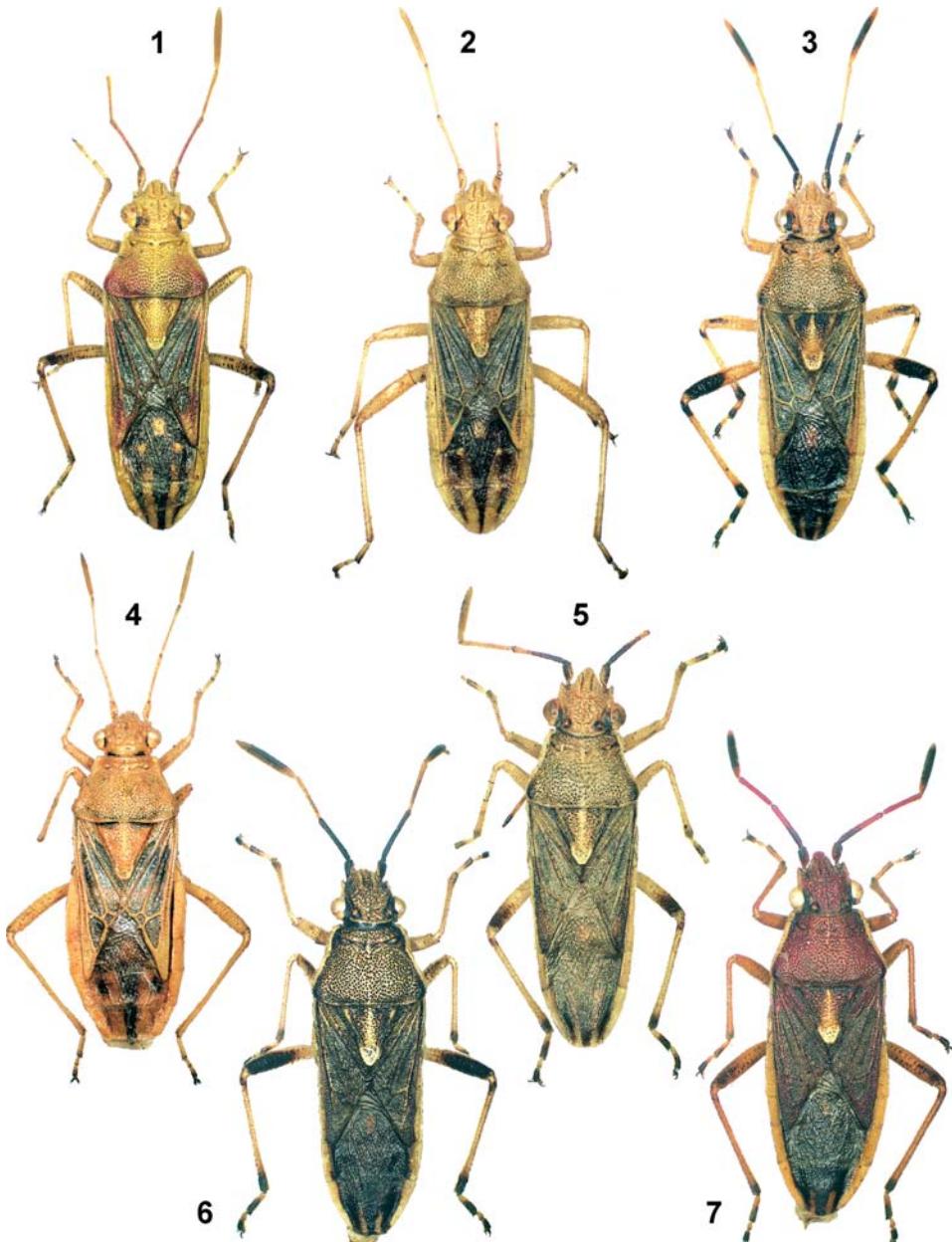
## Results

### *Maccevethus corsicus corsicus* Signoret, 1862 (Figs 5–7, 28–33; SEM 1–2)

*Maccevethus corsicus* Signoret, 1862: 376.

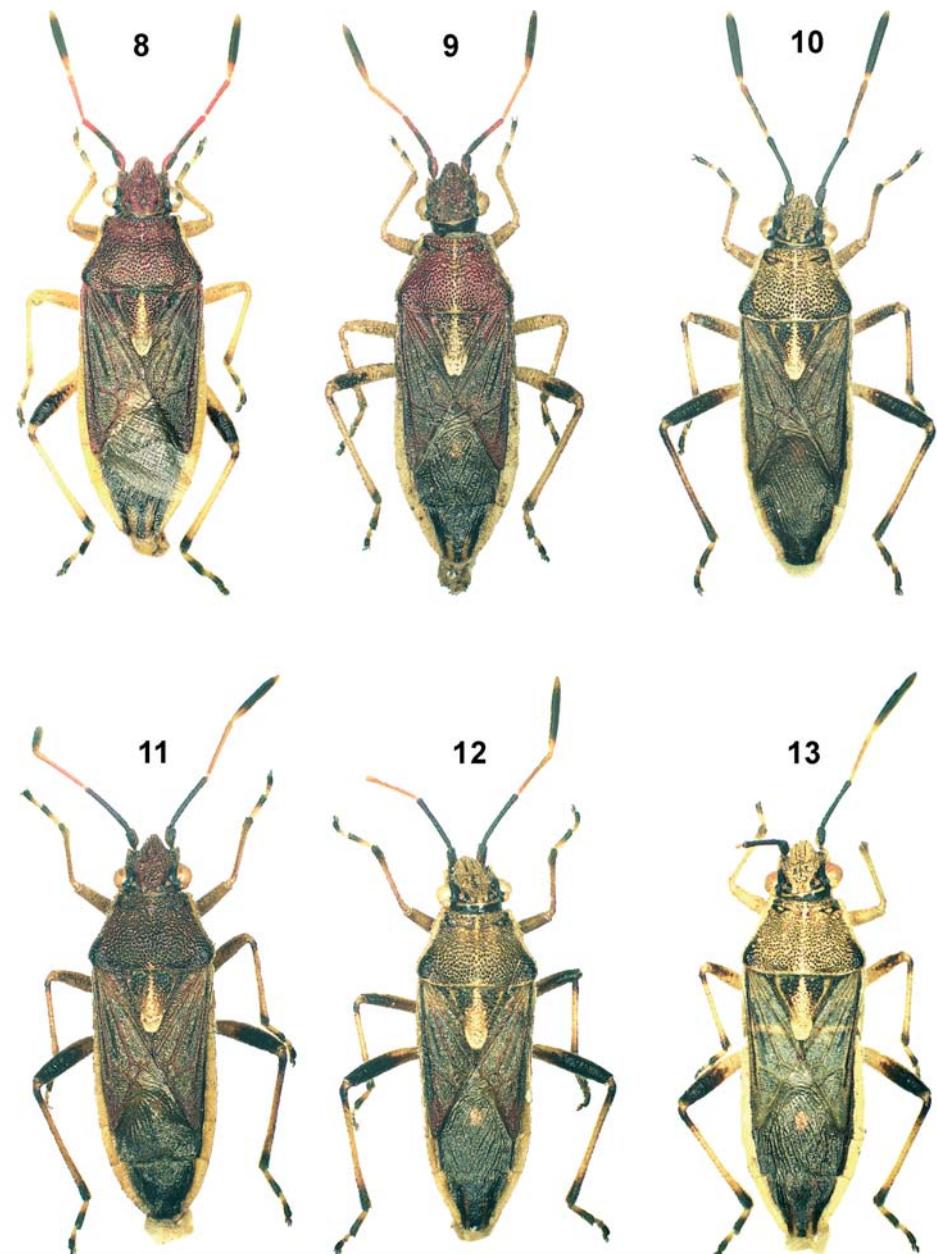
= *Maccevethus lutheri* Wagner, 1953: 388. Synonymized by JOSIFOV (1966: 61).

**Material examined.** ARMENIA: Parpi, 1600 m a.s.l., 31.v.1973, 1 ♂, A. Svozil lgt. (MMBC). BULGARIA: Blagoevgrad province: Kresensko def.[ile], vi.[without year], 1 ♂, Mařan & Táborský lgt. (NMPC); gara Kresna [Mt.], Kresnenske defile (4B/76), 230–300 m a.s.l., 1.–2.vi.1976, 1 ♂ (Fig. 6), P. Lauterer lgt. (MMBC); Liljanovo [= Lilyanovo] – Popina Laka, 250–500 m a.s.l., 4.vi.1978, 2 ♂♂, K. Majer lgt. (MMBC); Sandanski, 26.vii.1966, 2 ♂♂, M. Kocourek lgt. (MMBC); Sandanski, 28.v.–8.vi.1967, 4 ♂♂ (Figs 29, 31), K. Pospíšil lgt. (MMBC); gara Sandanski [Mt.] (2B/72), steppe, 120–140 m a.s.l., canal banks, 9.viii.1972, 2 ♂♂, P. Lauterer lgt. (MMBC); Sandanski, Struma river banks, steppe (2+3B/72), 120–140 m a.s.l., 9.viii.1972, 1 ♂, A. Merta lgt. (MMBC); Sandanski, vii.1966, 1 ♂, M. Slouková lgt. (NMPC). Burgas province: Arkutino, 10.–26.vii.1974, 1 ♂, [no collector] (NMPC); Slančev brjag [= Slancev Brjag], 13.–17.vi.1971, 1 ♂, J. Sekera lgt. (MMBC). Dobrich province: Zlaté písky [= Zlatni Pyassatsi National Park], 21.vi.1976, 1 ♂, Sekera lgt. (MMBC). Khaskovo province: Harmanli [= Kharmanli], 90 m a.s.l., 20.vii.1971, 1 ♂ (Fig. 7), Kroupa & Ditrich lgt. (MMBC); Harmanli (steppe) (82/71), 80–120 m a.s.l., 18.viii.1971, 1 ♂, P. Lauterer lgt. (MMBC).

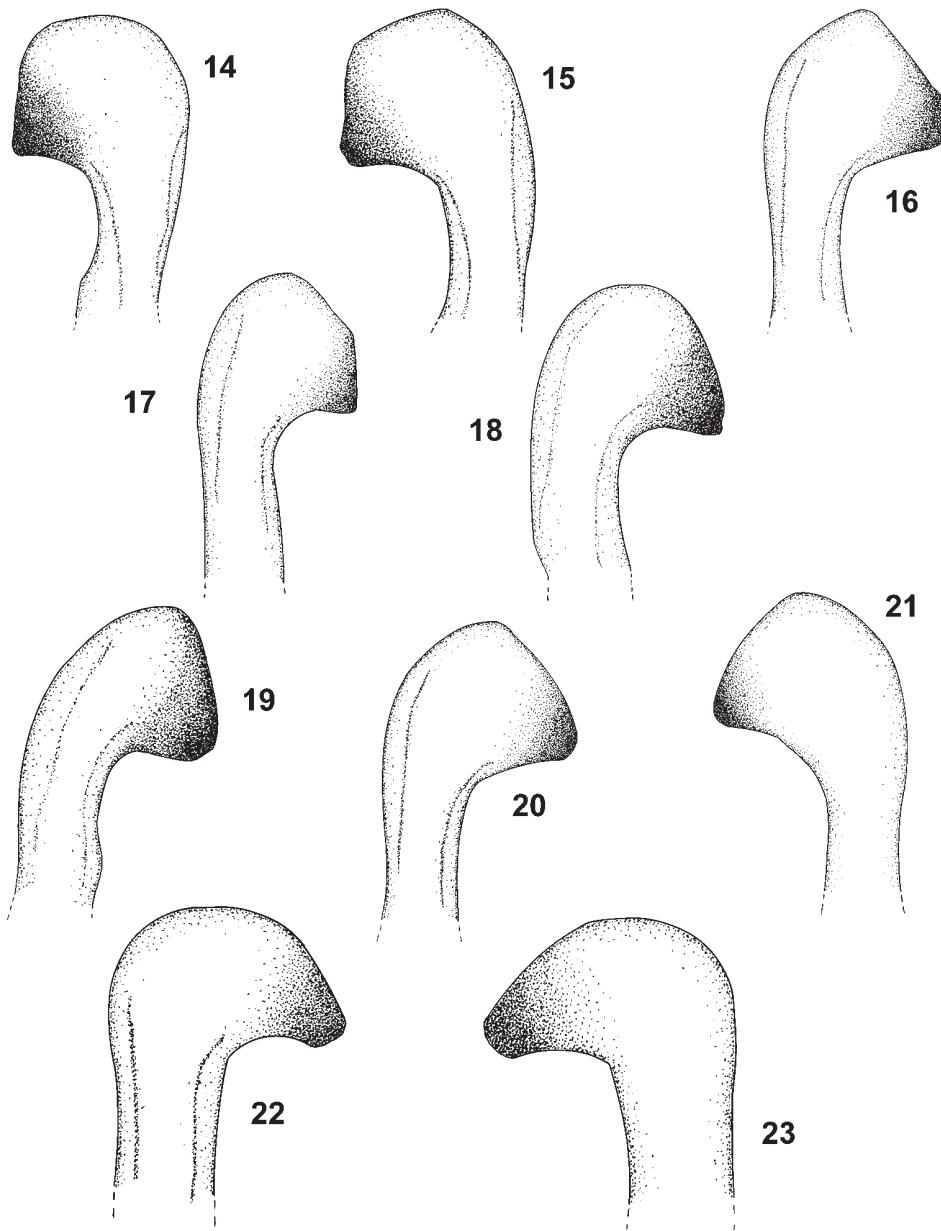


Figs 1–7. Habitus. 1–2 – *M. corsicus persicus* Jakovlev, 1882: 1 – ♂ from Afghanistan: Gazerghah, 2 – ♂ from Afghanistan: Bala Murghab. 3 – *M. caucasicus* (Kolenati, 1845): ♂ from Afghanistan: Bala Murghab. 4 – *Maccevethus* sp.: ♀ from Afghanistan: Bala Murghab. 5–7 – *M. corsicus corsicus* Signoret, 1862: 5 – ♂ from Turkey: Ankara – Baraj, 6 – ♂ from Bulgaria: gara Kresna, 7 – ♂ from Bulgaria: Harmanli.

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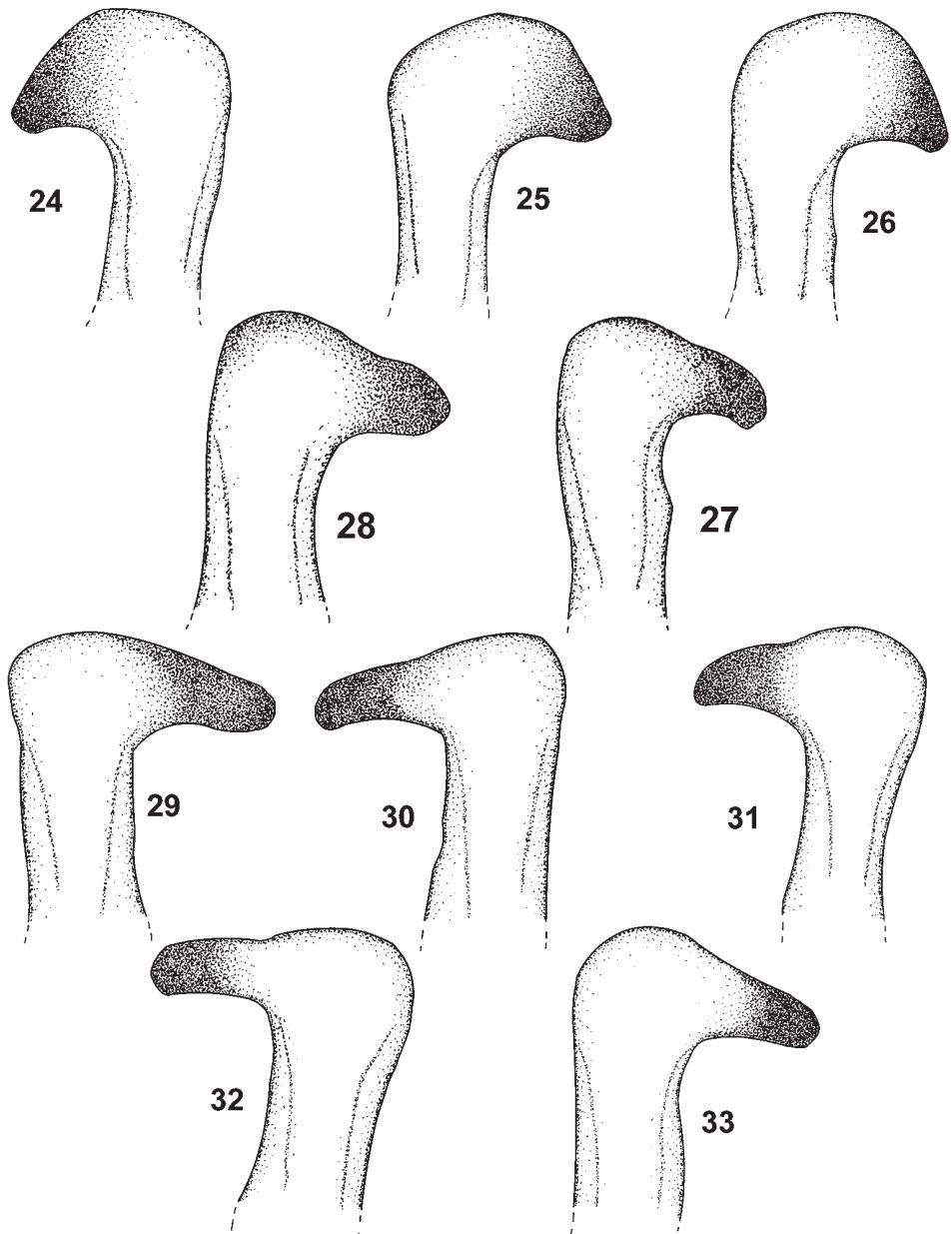


Figs 8–13. Habitus. 8 – *M. errans* (Fabricius, 1794): ♂ from Portugal: Rocha de Pena, 9–13 – *M. caucasicus* (Kolenati, 1845): 9 – ♂ from Portugal: Rocha de Pena, 10 – ♂ from Bulgaria: Harmanli, 11 – ♂ from Bulgaria: Sandanski → Liljanovo, 12 – ♂ from Bulgaria: gara Sandanski, 13 – ♂ from Turkey: Ankara – Baraj.



**Figs 14–23.** Parameres. 14–21 – *M. caucasicus* (Kolenati, 1845): 14 – Slovakia: Štúrovo, 15 – France: Corse: Ajaccio, 16 – Slovakia: Štúrovo, 17 – Bulgaria: Sandanski, 18 – Afghanistan: Bala Murghab, 19 – Slovakia: Štúrovo, 20–21 – Portugal: Rocha de Pena. 22–23 – *M. errans* (Fabricius, 1794): Portugal: Rocha de Pena. 14–15 – right paramere; 16–23 – left paramere; 21, 23 – outer view; 14–20, 22 – inner view.

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**Figs 24–33.** Parameres, inner view. 24–26 – *M. errans* (Fabricius, 1794): 24 – Algeria: Forêt de Guetarnia, 25 – Tunisia: Karthago, 26 – Spain: Mallorca: Es Prat de S.[ant] Jordi. 27 – *M. corsicus persicus* Jakovlev, 1882: Mongolia: Bajanchongor aimak. 28–33 – *M. corsicus corsicus* Signoret, 1862: 28 – Iran: Kazerun; 29 – Bulgaria: Sandanski; 30 – Cyprus: Cherkes; 31 – Bulgaria: Sandanski; 32 – Turkey: Hacimusali; 33 – Turkey: Kozan. 24, 30–32 – right paramere; 25–29, 33 – left paramere.

**Kurdzhali province:** Momčilgrad [= Momchilgrad], Varbica [= V'rbitsa] river, 23.v.1978, 1 ♂, K. Majer lgt. (MMBC). **Varna province:** Kamčija [= Kamcija] stream (mouth), 7.viii.1970, 1 ♂, Kroupa & Ditrich lgt. (MMBC); Varna, vi.1962, 1 ♂, J. Sekera lgt. (MMBC); Varna, 3.v.1963, 1 ♂, J. Sekera lgt. (MMBC). **CROATIA:** Brač Island, Bol, 1.–6.vi.1965, 1 ♂, 12.vi.1965, 1 ♂, K. Pospíšil lgt. (MMBC); Dalmatia, Petrčane (6 km W of Zadar), 16.–21.vii.2000, 1 ♂, M. Mantič lgt. (MMHC). **CYPRUS:** Cherkes [= Cherkez], 17.–18.iii.1950, 1 ♂ (Fig. 30), Mavromoustakis lgt. (NMPC); Pyrgos, 9.iii.1966, 1 ♂, Mavromoustakis lgt. (NMPC). **FRANCE:** **Gard:** Nîmes env., [no date], 2 ♂♂, [no collector] (PSPC). **Hérault:** Saint-Guilhem-le-Désert, Pont du Diable (43°42'47"N 3°33'27"E), 18.x.2007, 2 ♂♂, J. Votýpká lgt. (NMPC); Sète, 23.x.1962, 1 ♂, [no collector] (PSPC) (SEM 1–2). **Var:** Agay – Var, v.1927, 3 ♂♂, v.1928, 1 ♂, J. Obenberger lgt. (NMPC), P. Moulet 1992 det. as *M. corsicus*; Draguignan, [18]99, 1 ♂, [no collector] (NMPC); Le Lavandou, 1930, 11 ♂♂, Expeditio Do. Dr. J. Obenberger lgt. (NMPC). **GEORGIA:** Tbilisi, L. ozero [= Tbilisi reservoir], 650–800 m a.s.l., 24.v.1973, 1 ♂, A. Svožil lgt. (MMBC); Tbilisi – Chanisi, 20.–25.vi.1957, 1 ♂, J. Dlábola lgt. (NMPC); ‘S Rossia, VI., Kdazori, 1957, Dlábola lgt.’ [= Georgia, Khadori], 1 ♂ (NMPC). **GREECE: Eastern Macedonia and Thrace:** Rodopi Mts., Livadero, Drama env., 31.v.2006, 1 ♂, Z. Malinka lgt. (ZMOC). **Peloponnese:** Issari [= Ísaris], 1935, 1 ♂, Mařan & Štěpánek lgt. (NMPC); Voutiani [= Voutiánoi], N of Sparti, Loc. no. 10, 14.vii.1986, 1 ♂, [no collector]. (NMPC). **IRAN:** **Fars:** Kazerun (Loc. no. 45), 5.–6.vii.1970, 1 ♂ (Fig. 28), Exp. Nat. Mus. Praha lgt. (NMPC). **ITALY: Apulia:** Gargano, Lesina env., 3.v.1997, 1 ♂, J. Vilimová lgt. (NMPC). **Sardinia:** Cagliari province: ca. 2 km N of Santa Margherita, humid meadow, 22.v.2007, 1 ♂, P. Baňař leg. (MMBC). **Macedonia:** Dojran, 4.–11.vi.1974, 1 ♂, J. Hladil lgt. (MMBC); Katlanovo (31/67), 14.vi.1967, 1 ♂, P. Lauterer lgt. (MMBC). **MONTENEGRO:** Budva district, 3 km E of Sv. Stefan (08/01), 250–400 m a.s.l., 17.–25.vi.2008, 2 ♂♂, P. Baňař lgt. (MMBC); Djuraševiči [= Đuraševići] → Delfin (29L/82), maquis, cemetery, 50–150 m a.s.l., 25.x.1982, 1 ♂, P. Lauterer lgt. (MMBC); Radovići, Plavi Horizont, maquis, 3–20 m a.s.l. (15L/82), 13.–15.x.1982, 1 ♂, P. Lauterer lgt. (MMBC). **SYRIA:** Masyaf, 30.v.–3.vi.1990, 1 ♂, M. Krajčík lgt. (MMBC). **TURKEY (ASIAN PART): Adana province:** Hacimusali env. (N 37°21'01.3" E 35°15'39.4"), hill above the village, abandoned field, 604 m a.s.l., 9.v.2007, 1 ♂ (Fig. 32), P. Kment lgt. (NMPC); Kozan, Toros Mts., 8.–9.viii.1947, 1 ♂ (Fig. 33), Exp. N. Mus. ČSR lgt. (NMPC). **Ankara province:** Ankara – Baraj, 3.–4.vii.1947, 6 ♂♂ (Fig. 5), Exp. N. Mus. ČSR lgt. (NMPC). **Aydin province:** Aydin, olivlund [= olive grove], 6.vi.1968, 1 ♂, Ardö lgt. (NMPC). **İçel province:** Büyücek, Toros Mts., 29.–31.vii.1947, 3 ♂♂, Exp. N. Mus. ČSR lgt. (NMPC), P. Moulet 1992 det. as *M. corsicus*. **Osmaniye province:** Gyaur Dag [= Gyaur dağları Mts. ca. 12 km W of Fevzipaşa], 17.viii.1947, 1 ♂, Exp. N. Mus. ČSR lgt. (NMPC), P. Moulet 1992 det. as *M. corsicus*. **Yozgat province:** Derbent env. (N 39°59'03.9" E 34°39'19.8"), 18.v.2005, 1 ♂, P. Kment lgt. (NMPC).

**General distribution.** Only selected references are listed for the particular countries. Papers published before JOSIFOV's (1966) revision are largely omitted. For additional references see e.g. GÖLLNER-SCHEIDING (1983).

**EUROPE: Albania** (JOSIFOV 1970, as *M. lutheri*; JOSIFOV 1986; DOLLING 2006). **Bulgaria** (JOSIFOV 1969, 1974, as *M. lutheri*; JOSIFOV 1986; DOLLING 2006; this paper). **Croatia** (MOULET 1995; PROTIĆ 2001; DOLLING 2006; this paper). **France** (SIGORET 1862; JOSIFOV 1966, as *M. lutheri*; PUTSHKOV 1986; MOULET 1994, 1995; DOLLING 2006; this paper). **Greece** (HEISS 1983, as *M. lutheri*; JOSIFOV 1986; PUTSHKOV 1986; GÜNTHER 1990; MOULET 1994, 1995; RIEGER 1995; DOLLING 2006; this paper). **Italy** (JOSIFOV 1966, as *M. lutheri*; TAMANINI 1973, 1981, as *M. lutheri*; PUTSHKOV 1986; CARAPEZZA 1993, as *M. lutheri*; MOULET 1994, 1995; CARAPEZZA 1999; DOLLING 2006; this paper). **Malta** (RIEGER 1986; MOULET 1994, 1995; DOLLING 2006). **Macedonia** (GÖLLNER-SCHEIDING 1978, as *M. lutheri*; JOSIFOV 1986; MOULET 1995; PROTIĆ 2001; DOLLING 2006; this paper). **Montenegro** (this paper). **Russia: South European Territory** (WAGNER 1953, as *M. lutheri*; JOSIFOV 1966, as *M. lutheri*; PUTSHKOV 1986; DOLLING 2006). **Spain** (RIBES 1980, as *M. lutheri*; RIBES *et al.* 2000, 2004; RIBES & RIBES 2001; MOULET 1994; DOLLING 2006). **Ukraine** (PUTSHKOV 1962, as *M. lineola* (misidentification) and *M. persicus*; PUTSHKOV 1986; MOULET 1995; PUTSHKOV & PUTSHKOV 1996; DOLLING 2006). **Turkey: European part** (MOULET 1995, DOLLING 2006). **ASIA: Armenia** (PUTSHKOV 1986, DOLLING 2006; this paper). **Azerbaijan** (JOSIFOV 1966, as *M. lutheri*; PUTSHKOV 1986; DOLLING 2006). **Cyprus** (HOBERLANDT 1953a, as *M. lineola* (misidentification); MOULET 1995; DOLLING 2006). **Georgia** (PUTSHKOV 1986, DOLLING 2006, this paper). **Iran** (LINNAUORI & MODARRES 1998, DOLLING 2006). **Israel** (LINNAUORI 1960, as *M. persicus*; DOLLING 2006). **Lebanon** (JOSIFOV 1966, as

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*M. lutheri*; MOULET 1994, 1995; DOLLING 2006). **Syria** (this paper). **Turkey: Asian part** (HOBERLANDT 1956, as *M. persicus* (*partim*) – see Table 1 in Appendix; SEIDENSTÜCKER 1964, as *M. lineola* (misidentification); PEHLİVAN 1981, as *M. lutheri*; PUTSHKOV 1986; MOULET 1995; CANDAN *et al.* 2004, as *M. lutheri*; DOLLING 2006; DURSUN 2009; this paper).

**Remarks on distribution.** The records from Slovakia by STEHLÍK & VAVŘÍNOVÁ (1995) (cited in NEJEDLÁ (1997) and DOLLING (2006) and Iraq by HOBERLANDT (1953b) (cited in LINNAUORI (1993) and DOLLING (2006)) are based on misidentified specimens of *M. caucasicus* (see Table 1), *M. corsicus* is thus excluded from the faunal lists of both the countries.

According to KERZHNER (1998) (also accepted in DOLLING 2006)), the intermediates between *M. corsicus corsicus* and *M. corsicus persicus* reported by MOULET (1994) are mostly typical *M. corsicus corsicus* and partly *M. errans errans*. The paramere of “*M. persicus*” from Algeria figured by MOULET (1994) belongs beyond doubt to *M. errans*. MOULET (1995) listed *M. corsicus* as distributed in Algeria, “Tlemcen (coll. Eckerlein > M. Gev !)”. DOLLING (2006) did not list the species from Algeria, evidently considering MOULET’s (1995) record as referring to the MOULET’s (1994) drawing. To date there is no reliable record documenting the occurrence of *M. corsicus* in North Africa.

LINNAUORI & MODARRES (1998) published records of *M. corsicus* from the Iranian province of Khorasan, apparently following the synonymy by MOULET (1994, 1995) and thus not distinguishing *M. corsicus corsicus* and *M. corsicus persicus*.

**Taxonomy.** See note under *Maccevethus corsicus persicus*.

*Maccevethus corsicus persicus* Jakovlev, 1882

(Figs 1–2, 27)

*Maccevethus persicus* Jakovlev, 1882: 354. Downgraded by PUTSHKOV & KERZHNER (1983: 81).

**Material examined.** AFGHANISTAN: Badghis: Bala Murghab, 470 m a.s.l., 30.vi.–2.vii.1964, 1 ♂ 6.–10.vii.1964, 1 ♂, 10.–13.vii.1964, 1 ♂ (Fig. 2), O. Jakeš lgt. (MMBC). Herat: Gazergah, 1000 m a.s.l., 23.vii.1964, 1 ♂ (Fig. 1), O. Jakeš lgt. (MMBC); Zarmast Pass, 2700 m a.s.l., 22.vii.1964, 1 ♂, O. Jakeš lgt. (MMBC). MONGOLIA: Bayanhongor province: Bajanchongor aimak, Cagan Bogd ul, Tooroin bulag, 13 km E of border point Cagan bulag, Nr. 851, 1500 m a.s.l., 25.vi.1967, 1 ♂ (Fig. 27), Exp. Dr. Z. Kaszab 1967 lgt., I. Kerzhner 1974 det. as *M. persicus*, P. Moulet 1992 det. as *M. corsicus* (HNHM).

**General distribution.** Only selected references are listed for the particular countries. Papers published before JOSIFOV’s (1966) revision are largely omitted. For additional references see e.g. GÖLLNER-SCHEIDING (1983).

**ASIA: Afghanistan** (DOLLING 2006, this paper). **Iran** (‘Schakù’ [=Shahkuh] – JAKOVLEV 1882; East Iran – JOSIFOV 1966; Shahkuh, Shahrud – PUTSHKOV 1986; DOLLING 2006). **Kazakhstan: Asian part** (JOSIFOV 1966, ASANOVA 1971). **Mongolia** (KIRITSHENKO & KERZHNER 1976, HOBERLANDT 1977, PUTSHKOV 1986, DOLLING 2006, this paper). **Tajikistan** (JOSIFOV 1966, PUTSHKOV 1986, DOLLING 2006). **Turkmenistan** (JOSIFOV 1966, PUTSHKOV 1986, DOLLING 2006). **Uzbekistan** (JOSIFOV 1966, PUTSHKOV 1986, DOLLING 2006).

**Remarks on distribution.** *Maccevethus corsicus persicus* was first recorded from Afghanistan by HOBERLANDT & ŠVIHLA (1990a) without, however, an appropriate examination of the male genitalia. Our revision of their voucher material (see Table 1) demonstrates that all their records in fact belong to *M. caucasicus*. Here we provide the first reliable records of *M. corsicus persicus* from Afghanistan.

In similar fashion to the Afghanistan material, all the available males of *M. corsicus persicus* from Iran identified by L. Hoberlandt, published by HOBERLANDT & ŠVIHLA (1990b) and re-examined by us, in fact belong to *M. caucasicus*. On the other hand, one female from Fras: Kazerun published by HOBERLANDT & ŠVIHLA (1990b) as *M. errans caucasicus* is in fact a male of *M. corsicus corsicus*.

GIDAYATOV (1982) also published *M. persicus* from Azerbaijan, but judging by work published by PUTSHKOV (1986), this record belongs to *M. corsicus corsicus*.

The specimen from Mongolia that we studied was also examined by P. Moulet (see "Material examined"). It appears very probable that MOULET's (1994) figure 30 of a paramere from "Chine (Mongolie)" refers to this specimen.

**Taxonomy.** Addressing the status of *M. corsicus corsicus* and *M. corsicus persicus*, most of the specimens previously identified as *M. persicus* by Hoberlandt (HOBERLANDT 1953b, HOBERLANDT & ŠVIHLA 1990a,b) proved to be *M. caucasicus*. We therefore had only very limited material of *M. corsicus persicus* for examination (5 ♂♂ from Afghanistan, 1 ♂ from Mongolia), but these tended to fit to the distinguishing characters given by JOSIFOV (1966), i.e. shape and pilosity of the paramere, smaller size and pale coloration. We have examined only a single male from Fars province in south-western Iran (Fig. 28) which we identified as nominotypical *M. corsicus corsicus*. For these reasons we prefer to maintain the subspecies status for the time being.

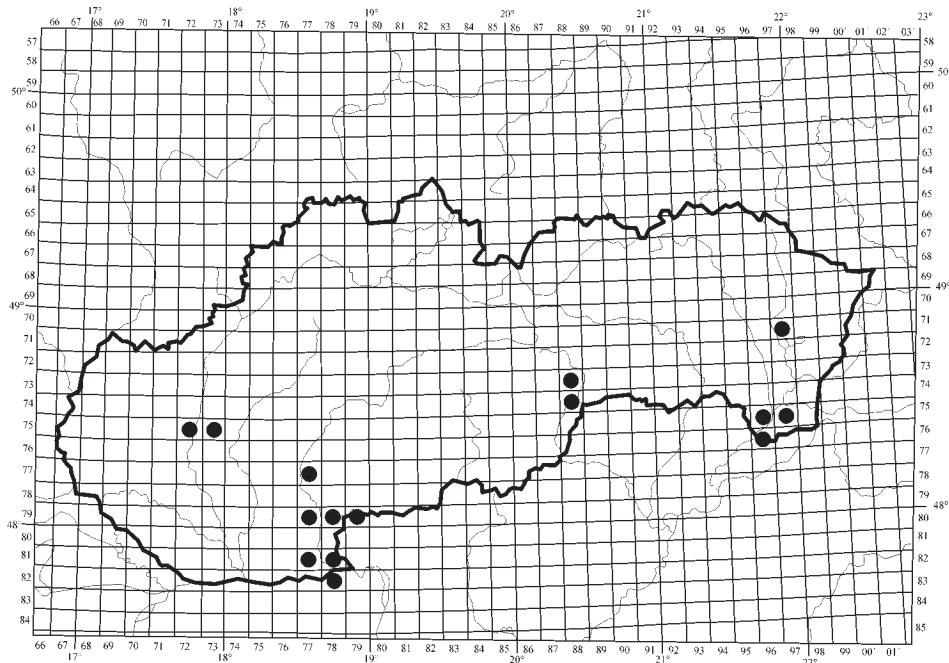
***Maccevethus caucasicus* (Kolenati, 1845) stat. restit.**

(Figs 3, 9–21, 34; SEM 3–6)

- ?*Cimex lineola* Fabricius, 1787: 302. Junior primary homonym of *Cimex lineola* Linnaeus, 1758, *Cimex lineola* Sulzer, 1776 and *Cimex lineola* Fabricius, 1781; synonymized by HORVÁTH (1901: 474).  
= ?*Cimex sanctaerucis* Gmelin, 1790: 2178. New name for *Cimex lineola* Fabricius, 1787.  
= ?*Cimex lineolaris* Turton, 1802: 664. New name for *Cimex lineola* Fabricius, 1787.  
= *Corizus caucasicus* Kolenati, 1845: 59 (syn. HORVÁTH 1901: 474).  
= ?*Maccevethus lineola* var. *chobauti* Horváth, 1895: 155. Synonymized by JOSIFOV (1966: 61).  
= *Stictopleurus elongatus* Blöte, 1934: 263. Synonymized by GÖLLNER-SCHEIDING (1975: 22).  
= ?*Maccevethus lineola* var. *macedonica* Kormilev, 1936: 31, 39, 54. Synonymized by JOSIFOV (1966: 61, suspected).  
= *Maccevethus houskai* Hoberlandt, 1952a: 15. Synonymized by JOSIFOV (1966: 61).

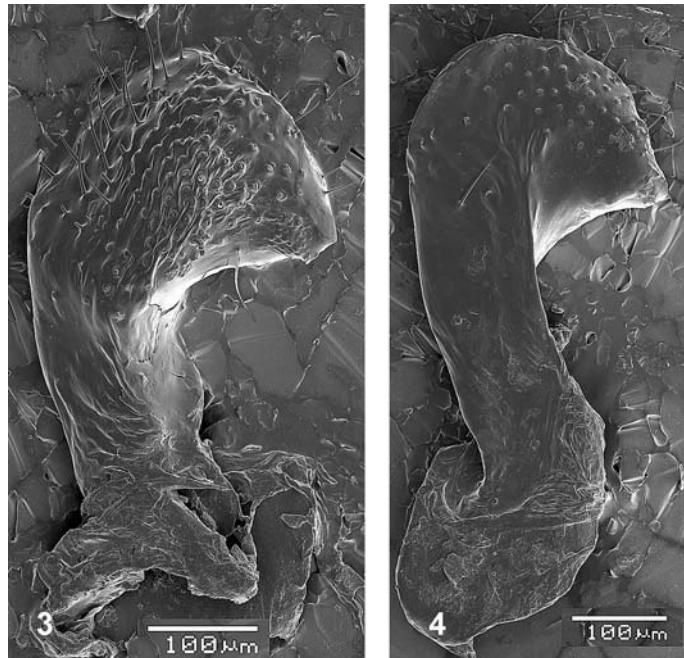
**Material examined.** AFGHANISTAN: **Badakhshan:** Firgamu, Kokshatal [= Koksha valley], 2300 m a.s.l., 20.vii.1950, 1 ♂, J. Klapperich lgt., P. Moulet 1992 det. as *M. caucasicus*, (NMPC). **Badghis:** Bala Murghab, 470 m a.s.l., 30.vi.–2.vii.1964, 2 ♂♂ (Fig. 3), 10.–13.vii.1964, 1 ♂, 1 ♂, 6.vii.1964, 1 ♂, 6.–7.viii.1964, 8.viii.1964, 2 ♂♂ (Fig. 18); O. Jakeš lgt. (MMBC); Bala Bokan, 1000 m a.s.l., 10.–11.viii.1964, 1 ♂, O. Jakeš lgt. (MMBC). **Baghlan:** Khinjan, Andaraptal [= Andarab valley], 1240 m a.s.l., 25.ix.1952, 2 ♂♂, J. Klapperich lgt. (NMPC). **Kabul:** Kabul env., 1740 m a.s.l., 25.v.1952, 1 ♂, 17.ix.1952, 1 ♂, J. Klapperich lgt., P. Moulet 1992 det. as *M. caucasicus*, (NMPC); Sarobi [= Sarowbi or Surobi], 1100 m a.s.l., 4.vi.1961, 1 ♂, G. Ebert lgt. (NMPC). **Nuristan:** Bashgultal [= Landaisin river aka Bashgul river], 1100m a.s.l., 22.iv.1953, 1 ♂; P. Moulet 1992 det. as *M. caucasicus*, 1100 m a.s.l., 24.iv.1953, 1 ♂; 1200 m a.s.l., 3.v.1953, 1 ♂; J. Klapperich lgt. (NMPC). **Parwan:** Paghmangebirge [= Pagman Mts. ca. 30 km NW Kabul], 2100 m a.s.l., 14.vi.1953, 1 ♂, J. Klapperich lgt., P. Moulet 1992 det. as *M. caucasicus*, (NMPC). **BOSNIA AND HERZEGOVINA:** Mostar, 27.vii.[without year], 2 ♂♂, Štěpánek lgt. (NMPC). **BULGARIA:** Bulgaria [no locality and date], 1 ♂, coll. Duda (NMPC). **Burgas province:** Eminská Planina, 6.–19.vi.1970, 1 ♂, K. Pospíšil lgt. (MMBC); Slančev brjag [= Slancev Brjag], sand, 25.viii.1972, 4 ♂♂, J. L. Stehlík lgt. (MMBC). Slančev brjag (82/76), 5–40 m

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**Fig. 34.** Distribution map of *M. caucasicus* (Kolenati, 1845) in Slovakia.

a.s.l., 3.ix.1976, 1 ♂, L. Pospíšilová lgt. (MMBC); Sozopol, 15.vii.1963, 1 ♂, J. Raušer lgt. (MMBC); Sv. Vlas [= Vlas, Sveti Vlas], 6.viii.1938, 2 ♂♂, L. Hoberlandt lgt. (NMPC); Sv. Vlas, 1.viii.1956, 1 ♂, L. Hoberlandt lgt. (NMPC). **Blagoevgrad province:** Alibotuš pl. [= Alibotush Mts.], Petrovo, 1100–1400 m a.s.l., 16.viii.1960, 1 ♂, L. Hoberlandt lgt. (NMPC); Kožut planina [= Kozhuh Mts.], 9.vi.1974, 1 ♂, J. Hladil lgt. (MMBC); gara Kresna [Mt.], Kresnenske chančie [= Kresenske Khanchie] (3B/76), 230–300 m a.s.l., 31.v.1976, 1 ♂, P. Lauterer lgt. (MMBC); Kresnensko def.[ile], 24.vi.1938, 1 ♂, L. Hoberlandt lgt. (NMPC); Sandanski, 19.vii.1956, 2 ♂♂, L. Hoberlandt lgt. (NMPC); Sandanski, vii.1966, 2 ♂♂, M. Slouková lgt. (NMPC); Sandanski, 26.vii.1966, 1 ♂, M. Kocourek lgt. (MMBC); Sandanski, 28.v.–vi.1967, 10 ♂♂, K. Pospíšil lgt. (MMBC); Sandanski, 17.v.1989, 5 ♂♂ (Fig. 17), I. Kovář lgt. (NMPC); Sandanski, Liljanovo [= Lilyanovo] (4B/72), NW slopes, 400–450m a.s.l., 10.viii.1972, 3 ♂♂ (Fig. 11), P. Lauterer lgt. (MMBC); Liljanovo – Popina Laka, 250–500 m a.s.l., 4.vi.1978, 1 ♂, K. Majer lgt. (MMBC); Sandanski, Liljanovo (5B/76), NW slopes, 250–500 m a.s.l., 4.–6.vi.1976, 1 ♂, P. Lauterer lgt. (MMBC); gara Sandanski [Mt.] (2B/72), steppe, 120–140 m a.s.l., canal banks, 9.viii.1972, 5 ♂♂ (Fig. 12), P. Lauterer lgt. (MMBC); Vlachi Pirin [= Vlakhi, Pirin Mts.], vii.1932, 1 ♂, Mařan & Táborský lgt. (NMPC); Yavorovo near Sandanski, 6.viii.2005, 2 ♂♂, Z. Malinka lgt. (ZMOC). **Dobrich province:** Zlatni pjasci [= Zlatni Pyassatsi National Park], 22.–23.v.1967, 2 ♂♂, J. Sekera lgt. (MMBC). **Khaskovo province:** Harmanli [= Kharmanli], steppe, (82/71), 80–120 m a.s.l., 18.viii.1971, 2 ♂♂, P. Lauterer lgt. (MMBC); Harmanli, 90 m a.s.l., 20.vii.1971, 8 ♂♂ (Fig. 10), Kroupa & Ditrich lgt. (MMBC); Kujažovo [= Knyazhevo], 8.vi.1908, 1 ♂, Rambousek lgt. (PSPC). **Pazardzhik province:** Parardrik [sic!; = Pazardzhik], Belovo gora [Mt.], 4.vi.1964, 1 ♂, J. Raušer lgt. (MMBC). **Sofia province:** Godec [= Godech], 21.v.1989, 1 ♂, I. Kovář lgt. (NMPC); Jablanica [= Yablanitsa], 28.viii.1960, 1 ♂,



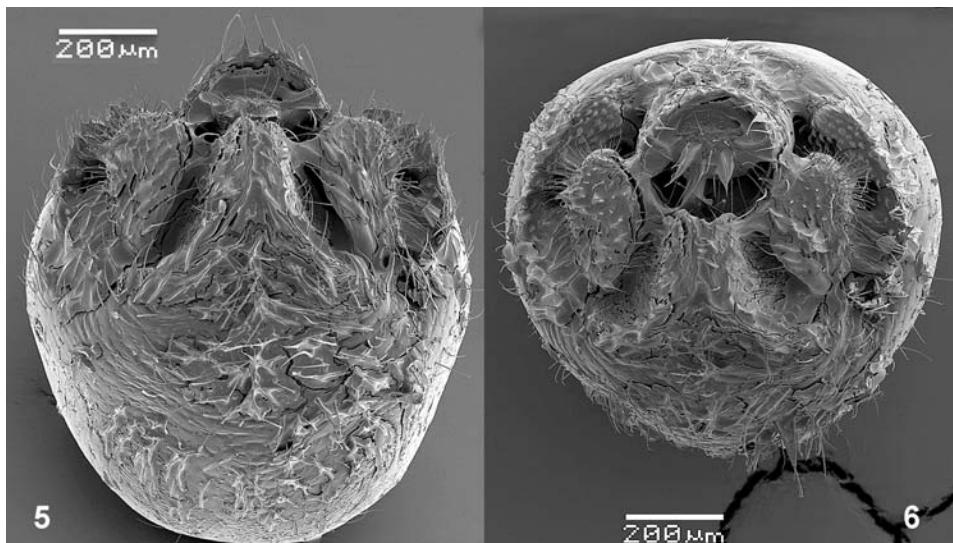
**SEM 3–4.** Parameres of *M. caucasicus* (Kolenati, 1845), ♂ from Hungary, Misina Hill (3 – outer face, 4 – inner face).

L. Hoberlandt lgt. (NMPC). **Varna province:** Varna, vi.1934, 1 ♂, Táborský & Procházka lgt. (NMPC). **FRANCE:** France [no locality and date], 1 ♂, coll. Duda, P. Moulet 1992 det. as *M. caucasicus* (NMPC). **Corse:** Ajaccio, v.1928, 1 ♂ (Fig. 15), Mařan lgt. (NMPC). **GEORGIA:** Dušeti [= Dusheti], 700–800 m a.s.l., 23.v.1973, 1 ♂, A. Svozil lgt. (MMBC). **GREECE: Fthiotis:** Hypati [= Ipáti], iv.1936, 1 ♂, Mařan & Táborský lgt. (NMPC). **Thessalia:** Kalambaka, Pinios river valley, 5.–8.v.2008, 1 ♂, Z. Malinka lgt. (ZMOC). **HUNGARY:** Mecsek, Misina Mt., 26.v.1964, 3 ♂♂ 6 ♀♀, P. Štys lgt. (PSPC) (SEM 3–4); Mecsek, Misina, 30.v.1964, 1 ♂ 1 ♀, J. Buchar lgt. (PSPC); Villányihegy, Máriagyűd [= Siklós], 28.v.1964, 1 ♀, P. Štys lgt. (PSPC). **IRAN: Fars:** 48 km N Masír (Loc. no. 238), 2230 m a.s.l., 12.vi.1973, 1 ♂, Exp. Nat. Mus. Praha lgt., P. Moulet 1992 det. as *M. caucasicus* (NMPC); 29 km E of Yasuj (Loc. no. 245), 2300 m a.s.l., 16.–17.vi.1973, 3 ♂♂, Exp. Nat. Mus. Praha lgt., P. Moulet 1992 det. as *M. caucasicus* (NMPC). **Khorasan:** Golestan forest, 3 km N of Dasht (Loc. no. 375), 960 m a.s.l., 18.–19.vi.1977, 1 ♂, Exp. Nat. Mus. Praha lgt., P. Moulet 1992 det. as *M. caucasicus* (NMPC); Widif. Park, Robat-e Quareh Bil [= Robat-e Qareh Bil] (Loc. no. 78), 1000 m a.s.l., 30.vi.1970, 1 ♂, Exp. Nat. Mus. Praha lgt., P. Moulet 1992 det. as *M. caucasicus* (NMPC). **Lorestan:** Pol-e Tang, 60 km NW Andimeshk (Loc. no. 284), 10.–11.iv.1977, 2 ♂♂, Exp. N. Mus. Praha lgt. (NMPC). **Qazvin:** Qazvin (Loc. no. 29), 24.vi.1970, 1 ♂, Exp. Nat. Mus. Praha lgt. (NMPC). **Tehran:** Tehran, Evin [= Ewin], Alborz [Mts.] (Loc. no. 123), 1700–2000 m a.s.l., 14.iii.1973, 1 ♂, Exp. Nat. Mus. Praha lgt., P. Moulet 1992 det. as *M. caucasicus* (NMPC); Tehran, Golhak [= Qolhak], 1400 m a.s.l., ix.–x.1961, 1 ♂, J. Klapperich lgt. (NMPC); Tehran, Golhak, 9.–23.vi.1961, 1 ♂, J. Klapperich lgt. (NMPC). **West Azerbaijan:** 20 km N

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Shahpur [= Salmas] (Loc. no. 405), 27.vii.1977, 2 ♂♂, Exp. Nat. Mus. Praha lgt. (NMPC). **Zanjan:** 7 km E Sa'id Abad (N 36°23.3' E 48°11.7'), steppe, stream, at light, 1635 m a.s.l., 11.–12.v.2006, 1 ♂, J. Hájek & P. Chvojka lgt. (NMPC). **IRAQ:** Shakhawa, Kurdistan pers. [= Shaqlawah, 36°23'N 44°17'E], [no date], 1 ♂, Kálová di Lotti lgt. (NMPC); 30 km W of Mawsil [= Mosul, Al Mawṣil], 25.iii.1968, 1 ♂, P. Starý lgt. (MMBC). **ISRAEL:** Jerusalem, 28.iii.1941, 3 ♂♂, 4.iv.1946, 1 ♂, Houška lgt., L. Hoberlandt 1950 det. as *M. lineola*; Jerusalem, 30.vi.1942, 1 ♂, Houška lgt., L. Hoberlandt 1957 det. as holotype of *M. houskai* sp.n., (NMPC). **JORDAN:** Amman, 800 m a.s.l., 25.iii.1958, 1 ♂, 13.iv.1958, 2 ♂♂, 23.iv.1958, 1 ♂, 29.iii.1959, 1 ♂, J. Klapperich lgt. (HNHM, NMPC); O. Jordan, Jordantal, Arda road, 700 m a.s.l., 9.v.1958, J. Klapperich lgt. (HNHM). **KIRGHIZIA:** Tian Shan [Mts.], Frunze [= Bishkek] env., vi.1961, Křepinský lgt. (PSPC). **MACEDONIA:** Dojran, 25.vi.1980, 1 ♂, J. Picka lgt. (NMPC); Pančarevo, 15.vii.1956, 1 ♂, L. Hoberlandt lgt. (NMPC). **PORTUGAL: Faro province:** Rocha de Pena, 1 km N of Pena, steppe, sweeping, 4.xi.2004, 1 ♂ (Figs 9, 22–23), M. Mantič lgt. (NMPC). **SLOVAKIA:** Kráľovský Chlmec (7597), vi.1950, 1 ♂ 4 ♀♀, A. Hoffer lgt. (PSPC); Čajkov (7777), vi.1950, 1 ♀, M. Kocourek lgt. (MMBC); Kamenica nad Hronom (8178), 11.v.1954, 1 ♀, J. Palásek lgt. (MMBC); Kamenica nad Hronom (8178), viii.1952, 1 ♂, P. Štys lgt. (PSPC); Kamenica nad Hronom, 20.vi.1956, 2 ♂♂, Gottwald lgt. (MMBC); Kamenica nad Hronom, 2.vi.1960, 1 ♂, 8.vi.1960, 1 ♂, Exc. M. N. Pragae lgt. (NMPC); Kamenica nad Hronom, 10.vi.1962, 2 ♂♂ 2 ♀♀, P. Štys lgt. (PSPC); Kováčov (8178), [no date], 1 ♂, [no collector] (NMPC); Kováčov, v.1937, 1 ♀, [no collector] (NMPC); Kováčov, 15.vi.1948, 1 ♂, 7.vi.1949, 1 ♂, 17.vi.1949, 1 ♂ 6 ♀♀, A. Kováčov, 20.vi.1948, 1 ♂, 26.vi.1948, 2 ♂♂ 1 ♀, 11.vii.1950, 3 ♂♂ 1 ♀, 16.vi.1952, 1 ♀, 14.v.1954, 1 ♂, 29.vi.1955, 1 ♂, J. Palásek lgt. (MMBC); Kováčov, 19.vi.1956, 1 ♂, 20.vi.1956, 1 ♂, 21.vi.1956, 2 ♂♂ 5 ♀♀, 22.vi.1956, 1 ♀, v.1957, 1 ♂, J. Gottwald lgt. (MMBC); Kováčov, vii.1952, 1 ♀, K. Poláček lgt. (MMBC); Kováčov, vi.1954, 3 ♂♂ 3 ♀♀, M. Kocourek lgt. (MMBC); Kováčov, forest-steppe, 4.vi.1965, 3 ♂♂ 5 ♀♀, P. Štys lgt. (SEM 5–6) (PSPC); Parkaň – Belá [= Štúrovo → Belá] (8177–8278), 4.vi.1937, 1 ♀, A. Hoffer lgt. (NMPC); Parkaň – Kováčov [= Štúrovo → Kováčov] (81–8278), 26.v.1937, 1 ♂, 2.vi.1937, 2 ♀♀, 7.vi.1938 1 ♂, A. Hoffer lgt. (NMPC); Kováčovské kopce [hills] (8178), 14.vi.1948, 1 ♂, A. Hoffer lgt. (PSPC); Kováčovské kopce, 13.–14.iv.1951, 1 ♀, M. Součková lgt. (MMBC); Kováčovské kopce, 18.vii.1951, 8 ♀♀, [no collector] (MMBC); Kováčovské kopce, 13.vii.1953, 1 ♂ 6 ♀♀, M. Kocourek lgt. (MMBC); Kováčovské kopce, 19.vii.1953, 1 ♂ 3 ♀♀, P. Lauterer lgt. (MMBC); Kováčovské kopce, 6.vi.1960, 1 ♀, I. Tešová lgt. (MMBC); Kováčovské kopce, 28.v.1969, 1 ♂, L. Horáková lgt. (NMPC); Parkáň [= Štúrovo] (81–8278), [no date], 1 ♂ 2 ♀♀, vi.1948, 2 ♀♀, J. Obenberger lgt. (NMPC); Štúrovo (81–8278), [no date], 2 ♂♂ (Figs 14, 16), Kouřil lgt. (NMPC); Štúrovo, v.1951, 1 ♂ (Fig. 19) 1 ♀, R. Strejčková lgt. (NMPC); Štúrovo, v.1953, 1 ♂ 1 ♀, J. Strejček lgt. (PSPC); Štúrovo, 13.v.1954, 1 ♀, 19.vii.1954, 1 ♀, 26.vi.1955, 1 ♀, J. Palásek lgt. (MMBC); Štúrovo, ix.1954, 1 ♂ 4 ♀♀, M. Kudla lgt. (MMBC); Štúrovo, 6.v.1958, 1 ♂, O. Štěpanovičová lgt. (MMBC); Štúrovo, 15.viii.1960, 1 ♂, v.1961, 1 ♀, 16.v.1961, 1 ♂, 24.v.1961, 1 ♂, 28.v.1961, 1 ♂, vi.1964, 1 ♂, M. Kocourek lgt. (MMBC); Štúrovo, H.Faroh [= Hegyfarok, Belanské kopce hills] (8177), 13.vi.1954, 1 ♂, V. Balthasar lgt. (PSPC); Štúrovo, Hegyfarok, 4.vi.1960, 1 ♂, L. Hoberlandt lgt. (NMPC); Hegy Farok, 27.v.1961, 1 ♀, M. Kocourek lgt. (MMBC); Šahy (7797), 7.v.1950, [no collector], 1 ♂ (MMBC); Šahy, 19.v.1961, 1 ♂, 24.viii.1966, 1 ♂, J. L. Stehlík lgt. (MMBC); Šahy, 23.vii.1961, 1 ♀, 26.viii.1961, 1 ♀, Kocourek lgt. (MMBC); Šahy, 24.viii.1966, 2 ♂♂ 3 ♀♀, Pospišilová lgt. (MMBC). **TAJIKISTAN:** Babatag [= Aktau Mts., S of Hisor], 6.–8.v.1988, 1 ♂, M. Nikodým lgt. (MMBC); Hissar [= Gissar] Mts., Magov valley, 18.–21.ix.1989, 1 ♂, I. Kováč lgt. (NMPC). **TURKEY (ASIAN PART): Ankara province:** Ankara – Baraj, 3.–4.vii.1947, 1 ♂ (Fig. 13), Exp. N. Mus. ČSR lgt. (NMPC); Moğan Gölü [lake], 8.vii.1947, 5 ♂♂, Exp. N. Mus. ČSR lgt. (NMPC); Şereflikoçhisar env., Tuz Gölü (N 38°49' E 33°37'), field next to the salt lake, 1.v.2004, 1 ♂, P. Kment lgt. (NMPC). **İçel province:** Bürcük, Toros Mts., 29.–31.vii.1947, 1 ♂, Exp. N. Mus. ČSR lgt. (NMPC). **Mardin province:** Mardin env., Hop Geçidi pass, 11.–14.v.2005, 3 ♂♂, Z. Malinka lgt. (ZMOC). **Osmaniye province:** Gyaur Dag [= Gyaur dağları Mts. ca. 12 km W of Fevzipaşa], 17.viii.1947, 1 ♂, Exp. N. Mus. ČSR lgt. (NMPC). **Şanlıurfa province:** Birecik upon Eufrat [= Euphrates river] (37.02 N 37.58 E, UTM: DA09), 500 m a.s.l., pastures SE from town, 24.–26.iv.1997, 1 ♂, V. Vrabec lgt. (NMPC). **TURKEY (EUROPEAN PART): Edirne province:** Edirne, 8.–13.vi.1947, 7 ♂♂, Exp. N. Mus. ČSR lgt. (NMPC). **UZBEKISTAN:** Zeravshan, Aman-Kutan, 1200 m a.s.l., 1.–2.vi.1959, 2 ♂♂, J. Dlabola lgt. (NMPC).

**General distribution.** Only selected references are listed for the particular countries. Papers published before JOSIFOV's (1966) revision are largely omitted. For additional references see e.g. GöLLNER-SCHEIDING (1983).



**SEM 5–6.** Pygophore of *M. caucasicus* (Kolenati, 1845), ♂ from Slovakia, Kováčov (5 – posterior view, 6 – dorsal view).

**EUROPE:** ?**Albania** (HORVÁTH 1916, as *M. lineola* and *M. lineola* var. *errans* [not revised]; MANCINI 1953, as *M. lineola*, *M. lineola* var. *errans*, and *M. lineola* var. *macedonicus* [not revised]; JOSIFOV 1970, list of previous records only; JOSIFOV 1986, with ?). **Bosnia and Herzegovina** (APFELBEK 1891, as *M. errans*; PROTÍČ 2001; DOLLING 2006; this paper). **Bulgaria** (JOSIFOV 1966, 1969, 1974, 1986; MOULET 1995; DOLLING 2006; this paper). **Croatia** (PROTIČ 2001, DOLLING 2006). **France** (JOSIFOV 1966; MOULET 1994, 1995; DOLLING 2006). **Greece** (GÜNTHER 1990, MOULET 1995, DOLLING 2006, this paper). **Hungary** (PUTSHKOV 1986, KONDOROSY 1999, DOLLING 2006, this paper). **Italy** (TAMANINI 1981, DOLLING 2006). **Kazakhstan: European part** (DOLLING 2006). **Macedonia** (KORMILEV 1936, as *M. lineola* var. *macedonica*; GÖLLNER-SCHEIDING 1978; JOSIFOV 1986; MOULET 1995; PROTÍČ 1987, as *M. lineola*; PROTÍČ 2001; DOLLING 2006; this paper). **Portugal** (DE SEABRA 1926, 1929, as *M. lineola* [unrevised]; this paper). **Romania** (JOSIFOV 1986; PROTÍČ 1987, as *M. lineola*; KIS 2001; DOLLING 2006). **Russia: South European Territory** (JOSIFOV 1966, PUTSHKOV 1986, DOLLING 2006). **Serbia** (PROTIČ 1987, as *M. lineola*; PROTÍČ 2001). **Slovenia** (DOLLING 2006, PROTÍČ 2001, GOGALA 2008). **Slovakia** (HOBERLANDT 1944, as *M. lineola*; STEHLÍK & VAVŘÍNOVÁ 1995; NEJEDLÁ 1997; DAVIDOVÁ-VILÍMOVÁ *et al.* 2000; DOLLING 2006; this paper). **Spain** (VÁZQUEZ 1985; MOULET 1995; RIBES & GOULA 1995; RIBES *et al.* 1997, 2004; RIBES & RIBES 2000; DOLLING 2006). **Turkey: European part** (HOBERLANDT 1956, as *M. lineola*; PEHLİVAN 1981, as *M. lutheri*; JOSIFOV 1986; DOLLING 2006; this paper). **ASIA:** **Afghanistan** (HOBERLANDT & ŠVIHLA 1990a, as *M. errans caucasicus* and *M. corsicus persicus* (misidentification); MOULET 1995; DOLLING 2006). **Armenia** (DOLLING 2006). **Azerbaijan** (GİDAYATOV 1982, DOLLING 2006). **China (North-Western Territory)** (HSIAO 1977, as *M. lineola*; PUTSHKOV 1986; DOLLING 2006). **Georgia** (PUTSHKOV 1986, DOLLING 2006, this paper). **Iran** (JOSIFOV 1966; PUTSHKOV 1986; HOBERLANDT & ŠVIHLA 1990b, as *M. errans caucasicus* and *M. corsicus persicus* (misidentification); MOULET 1995; LINNAUORI & MODARRES 1998; DOLLING 2006; LINNAUORI 2007; MODARRES AWAL 2008). **Iraq** (HOBERLANDT 1953b, as *M. persicus* (misidentification); LINNAUORI 1993; MOULET 1995; DOLLING 2006).

**Israel** (HOBERLANDT 1952, as *M. lineola* and *M. houskai*; LINNAUORI 1960, as *M. lineola*; PUTSHKOV 1986; DOLLING 2006; this paper). **Jordan** (KATBEH *et al.* 2000, DOLLING 2006, this paper). **Kazakhstan: Asian part** (PUTSHKOV 1986, MOULET 1995, DOLLING 2006, ESENBEKOVA 2008). **Kirghizia** (PUTSHKOV 1986, DOLLING 2006, this paper). **Lebanon** (BLÖTE 1934, as *Stictopleurus elongatus*; PUTSHKOV 1986; MOULET 1994, 1995; DOLLING 2006). **Syria** (PUTSHKOV 1986, DOLLING 2006). **Tajikistan** (MOULET 1995, DOLLING 2006, this paper). **Turkey: Asian part** (HOBERLANDT 1956, as *M. lineola* and *M. persicus* (*partim*, misidentification); SEIDENSTÜCKER 1964, as *M. persicus* (misidentification); PUTSHKOV 1986; PEHLIVAN 1981, as *M. lutheri*; MOULET 1994, 1995; DOLLING 2006; this paper). **Turkmenistan** (DOLLING 2006). **Uzbekistan** (MOULET 1995, DOLLING 2006, this paper).

**Remarks on distribution.** FABRICIUS (1787: 302) cited the type locality of *Cimex lineola* as “Insula St. Crucis Americae”, now Saint-Croix, Virgin Islands, presumably in error (see JOSIFOV 1966 and DOLLING 2006).

From Bosnia and Herzegovina, *M. caucasicus* was listed by APFELBEK (1891, as *M. errans*) and by PROTIĆ (2001) without exact locality. Here we provide the first precise record and confirm its occurrence in this country.

DE SEABRA (1926, 1929) published *M. lineola* (with the synonym *M. errans*) from several localities in Portugal. However, the occurrence of the genus *Maccevethus* in Portugal has never been revised (e.g. MOULET 1995, DOLLING 2006). Here we provide a confirmed record from Portugal.

BLÖTE (1934) described the synonym *Stictopleurus elongatus* from the locality “Zahlé, E. Libanon, Syria”, which is actually Zahlah in Lebanon. GÖLLNER-SCHEIDING (1975) erroneously attributed this locality to Syria.

With reference to its occurrence in Albania, HORVÁTH (1916, as *M. lineola* and *M. lineola* var. *errans*) and MANCINI (1953, as *M. lineola*, *M. lineola* var. *errans*, and *M. lineola* var. *macedonicus*) published several records under names synonymous with *M. caucasicus*. However, JOSIFOV (1970) examined no specimen of *M. caucasicus* from this country, listing only old records. Later, JOSIFOV (1986) listed *M. caucasicus* from Albania with a question mark, and DOLLING (2006) omits this record from his catalogue completely. Therefore, *M. corsicus corsicus* is the only *Maccevethus* species reliably known from Albania to date, while records of *M. caucasicus* await confirmation.

**Distribution in Slovakia** (Fig. 34). *Maccevethus caucasicus* is known from the following Slovak localities:

- Stankovce (okres Michalovce) (7197), on tobacco fields (ŠTEPANOVIČOVÁ-HENTZOVÁ 1956, as *M. lineola*).
- Plešivecká planina Plateau (73–7488) (DOBŠÍK 1988, as *M. caucasicus*).
- Hlohovec env., Soroš, Sedlisko reserve (7572–73) (DOBŠÍK 1979, as *M. lineola*).
- S.-A.-Ujhely [= Sátoraljaújhely, Slovenské Nové Mesto] (75–7696) (HORVÁTH 1897, as *M. lineola*) [Larger part of the city is situated in Hungary, just at the Slovak border].
- Kráľovský Chlmec (7597) (this paper).
- Čajkov (7777), 1 km N of the village, SE slopes at the entrance of the Bukovská dolina Valley and surroundings of the Čajkovský potok Brook (STEHLÍK & VAVŘÍNOVÁ 1995, as *M. errans caucasicus*; this paper).

- Mikula (7977–78) (ROUBAL 1961, as *M. lineola*).
- Šahy (7979) (STEHLIK & VAVŘÍNOVÁ 1995, as *M. errans caucasicus*; this paper).
- Hegyfarok [= Belanské kopce Hills] (8177) at Štúrovo (NEJEDLÁ 1997, as *M. errans caucasicus*; this paper).
- Štúrovo, Modrý vršok (8177) [= Vŕšok Nature Reserve] (STEHLIK & VAVŘÍNOVÁ 1995, as *M. errans caucasicus*)
- Štúrovo → Belá (8177–8278) (this paper).
- Kamenica nad Hronom (8178) (ROUBAL 1961, as *M. lineola*; STEHLÍK & VAVŘÍNOVÁ 1995, as *M. errans caucasicus*; NEJEDLÁ 1997, as *M. errans caucasicus*; this paper).
- Kováčov (8178) (HOBERLANDT 1944, as *M. lineola*; ROUBAL 1961, as *M. lineola*; STEHLÍK & VAVŘÍNOVÁ 1995, as *M. errans caucasicus* and *M. corsicus corsicus* (misidentification); NEJEDLÁ 1997, as *M. errans caucasicus*; DAVIDOVÁ-VILÍMOVÁ *et al.* 2000, as *M. caucasicus*) and the adjacent Kováčovské kopce [Hills; = Burda] (8178) (BALTHASAR 1936, 1937, as *M. lineola*; STEHLÍK & VAVŘÍNOVÁ 1995, as *M. errans caucasicus*; NEJEDLÁ 1997, as *M. errans caucasicus*).
- Štúrovo [also as Parkán] (81–8278) (HOBERLANDT 1944, as *M. lineola*; STEHLÍK & VAVŘÍNOVÁ 1995, as *M. errans caucasicus*; NEJEDLÁ 1997, as *M. errans caucasicus*; DAVIDOVÁ-VILÍMOVÁ *et al.* 2000, as *M. caucasicus*).

As the only record of *M. corsicus corsicus* from Slovakia (STEHLIK & VAVŘÍNOVÁ 1995) was based on a misidentification, *M. caucasicus* is the only representative of the genus distributed in the Pannonian Plain. For this reason, we can accept even the distributional records from Slovakia based on females only as reliable. STEHLÍK & VAVŘÍNOVÁ (1995) summarized the occurrence in Slovakia as follows: "It has mainly been found in mountain ranges of volcanic origin (chiefly on andesites and their pyroclasts), occasionally also on limestone. Also found in lowlands on sediments supporting xerothermophilic vegetation. Recorded from elevations between 120 and about 313 m a.s.l.; on limestone it may occasionally reach around 500–700 m. Found in warm climatic regions 7, 5, 3, 2 and in the moderately warm MT 8 [*sensu* QUITT (1971)]." It is clear that *M. caucasicus* is confined to only the xerothermic localities of southern and south-eastern Slovakia, reaching the northern limit of its distribution there. ŠTEPANOVICOVÁ & BIANCHI (2001) included *M. caucasicus* in the Red List of the Slovak Heteroptera, categorising it as an endangered species.

**Taxonomy.** JOSIFOV (1966) and MOULET (1994, 1995) recognized *M. errans* and *M. caucasicus* as different species, separated on the basis of differences in the shape of the parameres. However, PUTSHKOV & KERZHNER (1983) and KERZHNER (1998) classified both taxa as a single species with two subspecies, *M. errans errans* and *M. errans caucasicus*, in view of the similar shapes of the parameres and the presumably adjacent but allopatric areas of distribution, although they did not mention any intermediate forms for the two taxa. However, according to records by RIBES & GOULA (1995), RIBES & RIBES (2000) and RIBES *et al.* (2004) both *M. errans* and *M. caucasicus* occur

sympatrically in the Spain, and possibly in southern France as well (MOULET 1994, 1995). We have been able to examine two males from Portugal, collected in the same locality of Rocha de Pena (Faro province). Examination of the parameres of both males showed that one specimen represents typical *M. errans* (Figs 22–23), while the second is *M. caucasicus* (Figs 20–21). These findings enlarge the sympatric distribution of both the taxa to the entire Iberian Peninsula, at the minimum, providing in our opinion the first evidence of their syntopic occurrence. These facts, as well as the lack of intermediate forms, contradict subspecies classification and support them as separate (though closely related) species – *M. errans* and *M. caucasicus stat. restit.* For more details on the confused taxonomy of *Maccevethus* see “Discussion”.

***Maccevethus errans* (Fabricius, 1794)** (Figs 8, 22–26; SEM 7–8)

*Lygaeus errans* Fabricius, 1794: 152  
= *Cymus baeticus* Rambur, 1839: 141. Synonymized by BAERENSPRUNG (1860: 7).  
= *Maccevethus lineola* var. *ruficornis* Reuter, 1900a: 242, 1900b: 277. Synonymized by HORVÁTH (1901: 474).  
= *Maccevethus angustus* Wagner, 1949: 192. Synonymized by JOSIFOV (1966: 61).

**Material examined.** **ALGERIA:** Forêt de Guetarnia [= Guetarnia Forest], env. de Mercier-Lacombe, = Sfizef], 4.v.1969, 1 ♂ (Fig. 24), Tesař lgt. (NMPC). **MOROCCO:** Agadir, [no date], 1 ♂, Schwarz lgt. (PSPC) (SEM 7–8); Khémisset env., 24.iv.1995, M. Snížek lgt. (MMBC). **PORTUGAL:** **Algarve province:** 12 km S of Monchique, Serra da Monchique ( $37^{\circ}14'05''N$   $08^{\circ}32'39''W$ ), 43 m a.s.l., 14.–16.iv.2004, 1 ♂, J. Skuhrovec lgt., P. Kment det. (NMPC). **Faro province:** Rocha de Pena, 1 km N of Pena, steppe, sweeping, 5.iii.2004, 1 ♂ (Figs 8, 22–23), M. Mantič lgt. (NMPC). **SPAIN:** **Mallorca:** Palma env., Es Prat de S.[ant] Jordi, 1 ♂ (Fig. 26), Coll. Salvator, P. Moulet 1992 det as *M. caucasicus* (NMPC); Es Coll d'en Rabasa 1 ♂, Coll. Salvator, P. Moulet 1992 det. as *M. errans* (NMPC). **TUNISIA:** Karthago [= Carthage], [no date], 1 ♂ (Fig. 25), [no collector] (NMPC).

**General distribution.** Only selected references are listed for particular countries. Papers published before JOSIFOV's (1966) revision are largely omitted. For additional references see e.g. GÖLLNER-SCHEIDING (1983).

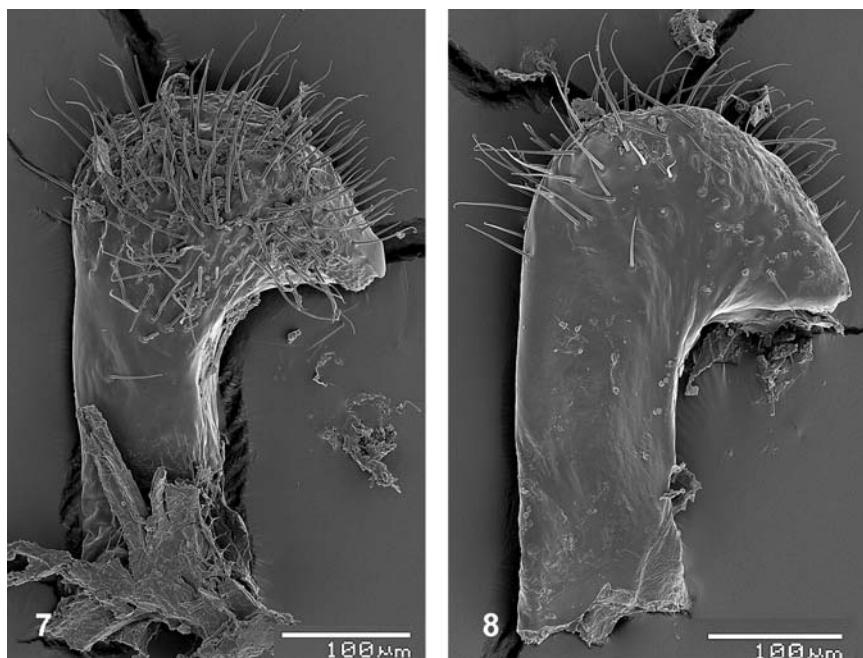
**EUROPE:** ?**Croatia:** Split (MOULET 1994, 1995, DOLLING 2006). **France** (MOULET 1994, 1995; DOLLING 2006). **Portugal** (this paper). **Spain** (RAMBUR 1839, as *Cymus baeticus*; WAGNER 1949, as *Maccevethus angustus*; JOSIFOV 1966; VÁZQUEZ 1985; MOULET 1994, 1995; RIBES & GOULA 1995; RIBES *et al.* 2004; DOLLING 2006).

**AFRICA:** **Algeria** (REUTER 1900a,b, as *Maccevethus lineola* var. *ruficornis*; ECKERLEIN & WAGNER 1965; JOSIFOV 1966; MOULET 1994, 1995; DOLLING 2006; this paper). **Libya** (MANCINI 1942, as *Maccevethus lineola* var. *errans*; ECKERLEIN & WAGNER 1969) [not revised]. **Morocco** (JOSIFOV 1966; MOULET 1994, 1995; DOLLING 2006; ARAHOU 2008; this paper). **Tunisia** (JOSIFOV 1966; MOULET 1994, 1995; CARAPEZZA 1997; DOLLING 2006; this paper).

**ASIA:** ?**Turkey (Asian part):** Gaziantep, Ankara, Kayseri, Iskenderun (MOULET 1994, 1995; DOLLING 2006).

**Remarks on distribution.** DE SEABRA (1926, 1929) published *M. lineola* (with synonym *M. errans*) from several localities in Portugal. However, the occurrence of the genus *Maccevethus* in Portugal has never been revised (e.g. MOULET 1995, DOLLING 2006). Here we provide the first explicit record of *M. errans* from Portugal.

Records from Libya (MANCINI 1942, as *Maccevethus lineola* var. *errans*; ECKERLEIN & WAGNER 1969) have never been further revised but as *M. errans* is the only *Maccevethus* species occurring in North Africa, they are probably correct. Nevertheless,



**SEM 7–8.** Paramere of *M. errans* (Fabricius, 1794), ♂ from Morocco, Agadir (7 – outer face, 8 – inner face).

distribution of this species in Libya was neglected by both MOULET (1995) and DOLLING (2006).

Concerning records of *M. errans* from southern France, Croatia, and Turkey provided by MOULET (1994, 1995) and questioned by KERZHNER (1998), *M. errans* has been reliably recorded several times from adjacent Catalonia (e.g., RIBES *et al.* 2004), so its presence in south-western France is probable. On the other hand, the presence of *M. errans* on the Balkan Peninsula and in Anatolia seems rather improbable to us and we list the records here as doubtful.

VÁZQUEZ (1982) keyed *M. caucasicus*, *M. errans* and *M. lutheri* from the Iberian Peninsula. However, his figure of the paramere of *M. errans* is, in our opinion, more appropriate to *M. corsicus corsicus*.

**Taxonomy.** See the comment under *M. caucasicus* and Discussion.

### Discussion

A basic revision of the genus *Maccevethus* was published by JOSIFOV (1966), who emphasized the structure of the parameres (in terms of shape and pilosity) as the only reliable distinguishing character for the genus. He recognized four species: *M. errans* (Fabricius, 1794), *M. caucasicus* (Kolenati, 1845), *M. persicus* Jakovlev, 1882, and *M. lutheri* Wagner, 1953 (= *M. corsicus* Signoret, 1862, *nomen oblitum*).

PUTSHKOV & KERZHNER (1983) restored the name *M. corsicus* Signoret, 1862 instead of *M. lutheri*, and divided the four taxa into two species-pairs, each with two subspecies: *M. errans errans*, *M. errans caucasicus*, *M. corsicus corsicus*, and *M. corsicus persicus*. They wrote: “The species in each pair have very similar structure of parameres and, according to Josifov, allopatric but adjacent areas of distribution. This is some evidence for regarding them as subspecies, especially because in the second pair [*corsicus* / *persicus*], there exist transitions between the two extreme forms, both in the shape of parameres and the external appearance” (PUTSHKOV & KERZHNER 1983). This status was generally accepted, especially in a monograph by PUTSHKOV (1986). KERZHNER (1998) added that specimens intermediate between the two subspecies of *M. corsicus* are found in Iran.

MOULET (1994) revised the genus *Maccevethus* and recognized three species: *M. errans*, *M. caucasicus*, and *M. corsicus* (with synonym *M. persicus*). Unfortunately, he did not list the examined material precisely, indicating only the countries of origin of the specimens figured. To support his solution, MOULET (1994) provided the following arguments:

- i) The case of *Maccevethus errans* and *M. caucasicus*: “*My study of the rich, important material of extremely wide distribution shows that Maccevethus caucasicus has a north-Mediterranean distribution as far as Central Asia, occurring from Murcia province (Spain) to Kazakhstan and Afghanistan. The distribution of Maccevethus errans appears to be more western, from the Maghreb in the west to former Yugoslavia (Dalmatia) in the East. The edge of Mediterranean France-Spain, northern Italy and the coast of Dalmatia constitute the zone of sympatric occurrence of the two taxa without hybridization. In fact, I have not found an intermediate type of paramere between the form caucasicus (figs. 12–17) and the form errans (18–27). In my opinion, that two entities have to be taken as valid species.*”
- ii) The case of *Maccevethus corsicus* and *M. persicus*: “*Maccevethus persicus, described from Iran is, according to JOSIFOV's (1966) keys to figures, distributed east of the Caspian Sea, while in the same paper, Maccevethus corsicus is widely distributed to the west of this region. The shape of the parameres, the main differentiating character, exhibit a great degree of variability. As shown in PUTSHKOV & KERZHNER (1983), I have studied all the intermediate forms between the «type corsicus» (figs. 1–11) and the «type persicus» (figs. 28–31). It is surely possible to find specimens with affinity to*

«persicus» from the areas not yet reported (namely the Mediterranean Basin). After all, in some parts of the Mediterranean Basin (the Maghreb, the islands, the Near and Middle East – Israel, Syria, Turkey and Iran) it is sometimes very difficult to recognize. Transitions in genus Maccevethus between the types *errans* and *corsicus* exist here, hopefully as a case of simple convergence. In view of the existing sympatrical distribution, with numerous intermediate forms between the types *persicus* and *corsicus*, I do not think it appropriate to retain the name *persicus*.”

MOULET (1995) subsequently figured the distribution of both *M. errans* and *M. caucasicus*, also listing localities for *M. errans* from southern France (Alpes-de-Haute-Provence, Drôme, Gard, Vaucluse), Croatia (Dalmatia: Split), and the Asian part of Turkey (Ankara, Gaziantep, Iskenderun, Kayseri).

KERZHNER (1998) criticised MOULET's revision (1994) from a formal point of view and rejected his results with the following arguments: “MOULET (1994) stated that *M. errans* and *M. caucasicus* are good species readily differing in the form of the parameres (with rounded and parabolic apical margin, respectively), and contrary to Josifov, cohabiting in the area from Spain to Dalmatia. However none of his figures illustrates *M. errans* from the latter area; his figures illustrate specimens from the same regions as given by Josifov: *M. caucasicus* from France to Turkey and Lebanon, *M. errans* from Spain and NW Africa. The only exception is a specimen referred to as *M. errans* and originating from Turkey (where distribution of *M. errans* is not given by Moulet). Examination of Moulet's figures (whether precise?) rather leads to conclusion that the two forms hardly can be distinguished and that Moulet's identifications are rather arbitrary: for example, the margin of paramere is regularly rounded in his *M. caucasicus* from Turkey (Moulet's fig. 15) and obviously parabolic in his *M. errans* from Spain (fig. 27). I consider therefore that *M. errans* and *M. caucasicus* are merely subspecies: *M. e. errans* and *M. e. caucasicus*. ”

Turning to the synonymy of *M. corsicus* and *M. persicus*, KERZHNER (1998) continues: “Moulet stated also that specimens resembling *M. persicus* and transitional to *M. corsicus* are found in the Mediterranean and therefore *M. persicus* cannot be maintained even as a subspecies of *M. corsicus*. But of the four figures given by Moulet as “persicus” two (fig. 28, Malta, and fig. 29, Lebanon) obviously refer to *M. c. corsicus*, one (fig. 31, Algeria) to *M. e. errans* (*M. corsicus* does not occur in Africa!) and the only figure actually referring to *M. c. persicus* (fig. 30, “Chine (Mongolie)”, actually S Mongolia) agrees exactly with the differences given by Josifov. Having examined a large material of *M. corsicus*, I confirm that outside of the small transitional zone the two forms of this species readily differ and deserve subspecific rank.”

However, KERZHNER (1998) missed the papers by VÁZQUEZ (1982: 31), RIBES & GOULA (1995) and RIBES *et al.* (1997), later followed by e.g., RIBES & RIBES (2000) and RIBES *et al.* (2004), which recorded both *M. errans* and *M. caucasicus* from Spain, even co-occurring in such a limited area as the Parc Natural de Montseny near Barcelona (RIBES & GOULA 1995). Based on their records, Jordi Ribes and his colleagues also accepted MOULET's (1994, 1995) view, regarding both *M. caucasicus* and *M. errans* as

separate species (see RIBES & RIBES 2000). RIBES & RIBES (2000) provided the following comment: "Taking into account that the 2, 3 or 4 species of the genus can only be separated by examining the shape of the parameres, the study of our material, including that of RIBES *et al.* (1997), accords well with MOULET's (1994) opinion. Nevertheless, we regard this option as only tentative and that additional characters, perhaps from the female genitalia, should be found in order to stabilize such a 'species dance' once and for all."

In the Palaearctic catalogue, DOLLING (2006) accepted KERZHNER's (1998) view, but he also accepted the distribution of *M. e. errans* according to MOULET (1995), including Croatia, France, and Turkey, and listed *M. e. caucasicus* from Spain. Only in the matter of the occurrence of *M. corsicus* in Algeria did DOLLING (2006) repeat KERZHNER's (1998) comment.

Despite the remarkable differences in coloration observed in our material, coloration is not reliable for identification, since two different species occurring at one locality often have the same coloration pattern (e.g. Figs 8 and 9), or specimens of one species collected at the same locality may look distinctly different (e.g. Figs 11 and 12). In the *Maccevethus* material we examined from Afghanistan, males of *M. corsicus periscus* (Figs 1 and 2) and *M. caucasicus* (Fig. 3) were identifiable by means of differences in coloration, but all the female specimens looked the same and their identification was impossible (Fig. 4). The remarkable colour variability had already been noted by JOSIFOV (1966) as is possibly related to differences in ecological conditions during the life cycle.

Considering the colour variability and taxonomic opinions reviewed above, the structure of the paramere remains the only reliable distinguishing character of *Maccevethus* species. However, there is also a certain variability in the shape of paramere within each species, something correctly mentioned by JOSIFOV (1966) and MOULET (1994). This situation could be further complicated by the fact that each paramere has two faces, the outer one of which is convex and setose (SEM 1, 3, 7) and the inner rather flat and lacking setae except at its upper margin (SEM 2, 4, 8). In the material we examined, we sometimes found specimens of *M. caucasicus* in which the paramere examined in inner view resembled *M. errans* but the outer face confirmed them as *M. caucasicus*. Careful discrimination of paramere faces during examination may eliminate some incorrect identifications; the outer, convex, face is the diagnostic one.

From other possible characters, VAVŘÍNOVÁ (1988, as *M. errans caucasicus*) illustrated the spermatheca of *M. caucasicus* from an undisclosed locality (most probably Slovakia), and CANDAN *et al.* (2004, as *M. lutheri*) provided SEM micrographs of the egg chorion of *M. corsicus corsicus* from Asian Turkey. As a detailed revision of the genus is not our basic intention, we have not examined additional potential distinguishing characters. Future molecular genetic studies of *Maccevethus* should provide additional evidence to elucidate their species status and phylogenetic relationships, especially if classical morphological taxonomy runs out of possibilities. On the other hand, information obtained by re-examination of the substantial material deposited in NMPC and MMBC has disclosed not only many corrections, confirmations and additions to the known distribution of the *Maccevethus* taxa, but also resulted in the necessity of commenting on their current taxonomic status.

PUTSHKOV & KERZHNER (1983) and KERZHNER (1998) argued for subspecies status of *M. caucasicus* and *M. errans* based on their allopatric but adjacent distribution. Despite the fact that MOULET (1994, 1995) provided insufficient evidence to support his opinion, there are other papers conforming the sympatric occurrence of the two species in Spain (RIBES & GOULA 1995; RIBES *et al.* 1997, 2004; RIBES & RIBES 2000). In this paper, we add a record of syntopic occurrence of both these taxa from Portugal. This apparent overlap of distribution and the lack of intermediate specimens (see PUTSHKOV & KERZHNER 1983, KERZHNER 1998) contradict subspecies status for the two taxa and we prefer to treat *M. caucasicus* **stat. restit.** as a distinct species.

Concerning the status of *M. corsicus corsicus* and *M. corsicus persicus*, we are rather uncertain about the validity of the distinguishing characters given by JOSIFOV (1966) and we must admit that our identifications of *M. c. persicus* are rather arbitrary. However, most of the specimens previously identified as *M. persicus* by Hoberlandt (HOBERLANDT 1953b, HOBERLANDT & ŠVIHLA 1990a,b) proved to be *M. caucasicus*, and we had only very limited material for examination, in particular only a single male from south-western Iran which appears to represent typical *M. corsicus corsicus*. For this reason we prefer to maintain the subspecies status for the time being.

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Source	State	Locality (in original spelling)	No. of specimens	Original identification	Revised identification
HOBERLANDT (1944)	Slovakia	Parkán – Kovačov (Hoffer lgt.) Kovačov (Král lgt.)	not indicated	<i>M. lineola</i>	<i>M. caucasicus</i>
HOBERLANDT (1952)	Israel	Jerusalem	4 ♂♂ 2 ♀♀	<i>M. lineola</i>	<i>M. caucasicus</i>
HOBERLANDT (1952)	Israel	Jerusalem	1 ♂ (holotype)	<i>M. hokkai</i>	<i>M. caucasicus</i> (JOSIFOV 1966, revid.)
HOBERLANDT (1953a)	Cyprus	Cherkes	4 ♂♂ 1 ♀	<i>M. lineola</i>	<i>M. corsicus corsicus</i>
HOBERLANDT (1953b)	Iraq	Shaqlawa	1 ♂ 1 ♀	<i>M. persicus</i>	<i>M. caucasicus</i>
HOBERLANDT (1956)	Turkey (European part)	Edirne	8 ♂♂ 12 ♀♀	<i>M. lineola</i>	<i>M. caucasicus</i>
HOBERLANDT (1956)	Turkey (Asian part)	Ankara – Baraj	4 ♀♀	<i>M. lineola</i>	<i>Maccevethus sp.</i> (indistinguishable)
HOBERLANDT (1956)	Turkey (Asian part)	Moğan gölü	1 ♂	<i>M. lineola</i>	<i>M. caucasicus</i>
HOBERLANDT (1956)	Turkey (Asian part)	Gyaür dağları	1 ♀	<i>M. lineola</i>	<i>Maccevethus sp.</i> (indistinguishable)
HOBERLANDT (1956)	Turkey (Asian part)	Toros: Büyücek	2 ♀♀	<i>M. lineola</i>	<i>Maccevethus sp.</i> (indistinguishable)
HOBERLANDT (1956)	Turkey (Asian part)	Ankara – Baraj	10 ♂♂ 6 ♀♀	<i>M. persicus</i>	<i>M. corsicus corsicus</i> [6 ♂♂] and <i>M. caucasicus</i> [1 ♂]
HOBERLANDT (1956)	Turkey (Asian part)	Moğan gölü	4 ♂♂ 2 ♀♀	<i>M. persicus</i>	<i>M. caucasicus</i>
HOBERLANDT (1956)	Turkey (Asian part)	Toros: Büyücek	5 ♂♂ 4 ♀♀	<i>M. persicus</i>	<i>M. corsicus corsicus</i> [3 ♂♂ and <i>M. caucasicus</i> [1 ♂]]
HOBERLANDT (1956)	Turkey (Asian part)	Toros: Kozan	1 ♂	<i>M. persicus</i>	<i>M. corsicus corsicus</i> [1 ♂] and <i>M. caucasicus</i> [1 ♂]
HOBERLANDT (1956)	Turkey (Asian part)	Gyaür dağları	2 ♂♂	<i>M. persicus</i>	<i>Maccevethus sp.</i> , dissected genitalia lost
HOBERLANDT (1959)	Iran	Tehran: Karadj	1 ♂	<i>M. persicus</i>	<i>Maccevethus sp.</i> , dissected genitalia lost
HOBERLANDT (1959)	Iran	Tehran: Ghorogh	1 ♂	<i>M. persicus</i>	

**Table 1.** Re-examination of *Maccevethus* records published by L. Hoberlandt and J. L. Stehlík. The records based on only females are regarded as unreliable, as their exact species identification is currently impossible. Records that we were unable to re-examine – the material is missing from NMPC – are written in italics. (Continued.)

Source	State	Locality (in original spelling)	No. of specimens	Original identification	Revised identification
HOBERLANDT (1977)	Mongolia	Bajanchongor aimak, Cagan Bogd ul Mountains, source Tooroin bulag, 13 km. E of boundary post Caganbulag Nuristan, Bashgul valley	1 ♂	<i>M. persicus</i>	<i>M. corsicus persicus</i>
HOBERLANDT & ŠVÍHLA (1990a)	Afghanistan	vicinity of Kabul	3 ♂♂ 5 ♀♀	<i>M. errans caucasicus</i>	<i>M. caucasicus</i>
HOBERLANDT & ŠVÍHLA (1990a)	Afghanistan	Badakhshan, Andarab valley, Khinjan	2 ♂♂ 2 ♀♀	<i>M. errans caucasicus</i>	<i>M. errans</i>
HOBERLANDT & ŠVÍHLA (1990a)	Afghanistan	Badakhshan, Vardush valley, Tshakaran	2 ♂♂ 2 ♀♀	<i>M. errans caucasicus</i>	<i>Maccevethus</i> sp. (indistinguishable)
HOBERLANDT & ŠVÍHLA (1990a)	Afghanistan	Badakhshan, Koksha valley, Senna	1 ♀	<i>M. errans caucasicus</i>	<i>Maccevethus</i> sp. (indistinguishable)
HOBERLANDT & ŠVÍHLA (1990a)	Afghanistan	Badakhshan, Koksha valley, Firgana	1 ♂ 2 ♀♀	<i>M. errans caucasicus</i>	<i>M. errans</i>
HOBERLANDT & ŠVÍHLA (1990a)	Afghanistan	N. Afghanistan, Angout	1 ♀	<i>M. errans caucasicus</i>	<i>Maccevethus</i> sp. (indistinguishable)
HOBERLANDT & ŠVÍHLA (1990a)	Afghanistan	Paghman mountains	1 ♂	<i>M. corsicus persicus</i>	<i>M. corsicus</i>
HOBERLANDT & ŠVÍHLA (1990a)	Afghanistan	Nuristan, Bashgul valley	1 ♂	<i>M. corsicus persicus</i>	<i>M. corsicus</i>
HOBERLANDT & ŠVÍHLA (1990a)	Afghanistan	E. Afghanistan, Sarobi	1 ♂	<i>M. corsicus persicus</i>	<i>M. corsicus</i>
HOBERLANDT & ŠVÍHLA (1990b)	Iran	Fars, Kazerun (loc. no. 45)	1 ♀	<i>M. corsicus persicus</i>	<i>M. corsicus</i>
HOBERLANDT & ŠVÍHLA (1990b)	Iran	Mazandaran, Robate-Ghareh bil, east park of Wildlife Park (loc. no. 78)	1 ♂ 2 ♀♀	<i>M. corsicus caucasicus</i>	<i>[♂]</i>
HOBERLANDT & ŠVÍHLA (1990b)	Iran	Tejhran – Evin (loc. no. 123)	1 ♂ 4 ♀♀	<i>M. errans caucasicus</i>	<i>M. errans</i>
HOBERLANDT & ŠVÍHLA (1990b)	Iran	Fars, Mian Jangal (loc. no. 223)	1 ♀	<i>Maccevethus</i> sp. (indistinguishable)	<i>M. corsicus caucasicus</i>

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Source	State	Locality (in original spelling)	No. of specimens	Original identification	Revised identification
HOBERLANDT & ŠVÍHLA (1990B)	Iran	Fars, Daryache-ye Maharlou (south bank of the lake) (loc. no. 227)	1 ♀	<i>M. errans caucasicus</i>	<i>Maccevethus sp. (indistinguishable)</i>
HOBERLANDT & ŠVÍHLA (1990B)	Iran	Fars, E Zagros, mountain pass 27 km. E. of Yassuj (loc. no. 244)	3 ♀♀	<i>M. errans caucasicus</i>	<i>Maccevethus sp. (indistinguishable)</i>
HOBERLANDT & ŠVÍHLA (1990B)	Iran	Fars, E Zagros, 29 km. E. of Yassuj and 10 km N. W. of Karun (loc. no. 245)	1 ♂	<i>M. errans caucasicus</i>	<i>M. caucasicus</i>
HOBERLANDT & ŠVÍHLA (1990B)	Iran	Karun (loc. no. 245) Lorestan, Pol-e Tang, 60 km. N. W. of Andimesk on the river Saimareh (loc. no. 284)	2 ♂♂	<i>M. errans caucasicus</i>	<i>M. caucasicus</i>
HOBERLANDT & ŠVÍHLA (1990B)	Iran	Mazandaran, 53 km. N. of Dasht, Golesian forest (loc. no. 375)	3 ♂♂	<i>M. errans caucasicus</i>	<i>Maccevethus sp. (indistinguishable)</i>
HOBERLANDT & ŠVÍHLA (1990B)	Iran	Mazandaran, Golestan forest, Mazari, 20 km. N. W. of Dasht (loc. no. 376)	3 ♀♀	<i>M. errans caucasicus</i>	<i>Maccevethus sp. (indistinguishable)</i>
HOBERLANDT & ŠVÍHLA (1990B)	Iran	Tehran, Alborz Kandavan pass (loc. no. 395)	1 ♀	<i>M. errans caucasicus</i>	<i>Maccevethus sp. (indistinguishable)</i>
HOBERLANDT & ŠVÍHLA (1990B)	Iran	Tehran, 8 km. N. E. of Zaiarn (loc. no. 400)	3 ♀♀	<i>M. errans caucasicus</i>	<i>Maccevethus sp. (indistinguishable)</i>
HOBERLANDT & ŠVÍHLA (1990B)	Iran	Azerbaijan, 20 km. N. of Shahpur (loc. no. 405)	2 ♂♂ 2 ♀♀	<i>M. errans caucasicus</i>	<i>M. caucasicus</i>
HOBERLANDT & ŠVÍHLA (1990B)	Iran	Baluchestan, Kuh-e Taftan, Valley Tamandan (loc. no. 167)	1 ♀	<i>M. errans caucasicus</i>	<i>Maccevethus sp. (indistinguishable)</i>
HOBERLANDT & ŠVÍHLA (1990B)	Iran	Khorassan, Soghand, S. slope of Kuh-e Binlad, 15 km. N. E. of Nishabur (loc. no. 365)	1 ♀	<i>M. errans caucasicus</i>	<i>Maccevethus sp. (indistinguishable)</i>
HOBERLANDT & ŠVÍHLA (1990B)	Iran	Sarbaz, 11 km. N. up to and 30 km. S. of Sarbaz (loc. no. 145)	1 ♂	<i>M. errans caucasicus</i>	<i>not located in NMPC</i>

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Source	State	Locality (in original spelling)	No. of specimens	Original identification	Revised identification
<i>Hoberlandt &amp; Švihla</i> (1990b)	Iran	Baluchestan, 3 km. N. of Rask (loc. no. 147)	1 ♂ 1 ♀	<i>M. errans caucasicus</i>	<i>not located in NMPC</i>
<i>Hoberlandt &amp; Švihla</i> (1990b)	Iran	Baluchestan, Tis (loc. no. 150)	1 ♀	<i>M. errans caucasicus</i>	<i>Maccevethus sp. (indistinguishable)</i>
<i>Hoberlandt &amp; Švihla</i> (1990b)	Iran	Baluchestan, 15 km. S.E. of Nikshahr, valley of the river Nikshahr (loc. no. 152)	4 ♂♂ 2 ♀♀	<i>M. errans caucasicus</i>	<i>not located in NMPC</i>
<i>Hoberlandt &amp; Švihla</i> (1990b)	Iran	Baluchestan, 25 km. W. of Ghazre-Ghānd, 34 km. E. of Nikshahr (loc. no. 153)	1 ♂ 3 ♀♀	<i>M. errans caucasicus</i>	<i>not located in NMPC</i>
<i>Hoberlandt &amp; Švihla</i> (1990b)	Iran	Kerman, Mohammadabad, 35 km. N.N.W. of Sabzvaran on the road between Deh Bakri and Sabzvaran (loc. no. 187)	2 ♂♂ 3 ♀♀	<i>M. errans caucasicus</i>	<i>not located in NMPC</i>
<i>Hoberlandt &amp; Švihla</i> (1990b)	Iran	Kerman, Dowlatabad, 85 km. E. of Hajibabad on the road Sowghan and Hajibabad (loc. no. 192)	2 ♀♀	<i>M. errans caucasicus</i>	<i>Maccevethus sp. (indistinguishable)</i>
<i>Hoberlandt &amp; Švihla</i> (1990b)	Iran	Kerman, 7 km W. of Kakhon, 20 km. S. W. of Hajibabad (loc. no. 215)	1 ♀	<i>M. errans caucasicus</i>	<i>Maccevethus sp. (indistinguishable)</i>
<i>Hoberlandt &amp; Švihla</i> (1990b)	Iran	Kerman, Gardaneh-e Besan, 15 km. N.W. of Fark (loc. no. 218)	1 ♂ 5 ♀♀	<i>M. errans caucasicus</i>	<i>not located in NMPC</i>
<i>Hoberlandt &amp; Švihla</i> (1990b)	Iran	Fars, Tang-e Chogan-e Olia (ruins of Bishapur) (loc. no. 233)	1 ♂	<i>M. errans caucasicus</i>	<i>not located in NMPC</i>
<i>Hoberlandt &amp; Švihla</i> (1990b)	Iran	Hormozgan, Bila'i (loc. no. 329)	1 ♀	<i>M. errans caucasicus</i>	<i>Maccevethus sp. (indistinguishable)</i>
<i>Hoberlandt &amp; Švihla</i> (1990b)	Iran	Fars, Konardan, 30 km. E. of Gav Bandi (loc. no. 309)	1 ♀	<i>M. errans caucasicus</i>	<i>Maccevethus sp. (indistinguishable)</i>
<i>Hoberlandt &amp; Švihla</i> (1990b)	Iran	Hormozgan, Kuh-e Genu (loc. no. 322)	1 ♀	<i>M. errans caucasicus</i>	<i>Maccevethus sp. (indistinguishable)</i>

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Source	State	Locality (in original spelling)	No. of specimens	Original identification	Revised identification
Hoberlandt & Švihla (1990b)	Iran	Hormozgan, Bagh-e Tang, 6 km. W. of Genū, 50 km N. of Bandar Abbas (loc. no. 323)	1 ♀	<i>M. errans caucasicus</i>	<i>Maccevethus sp. (indistinguishable)</i>
Hoberlandt & Švihla (1990b)	Iran	<i>Hormozgan, S. of Bashagard (loc. no. 327)</i>	2 ♂♂ 2 ♀♀	<i>M. errans caucasicus</i>	<i>not located in NMPC</i>
Hoberlandt & Švihla (1990b)	Iran	<i>Hormozgan, Minab (loc. no. 328)</i>	1 ♂	<i>M. errans caucasicus</i>	<i>not located in NMPC</i>
Hoberlandt & Švihla (1990b)	Iran	Kerman, Saghdar, 30 km. N. N. E., Sabzvaran and 6 km. S. of Mohammadabad [sic!] (loc. no. 337)	1 ♀	<i>M. errans caucasicus</i>	<i>Maccevethus sp. (indistinguishable)</i>
Hoberlandt & Švihla (1990b)	Iran	Sistan, Kuh-e Khajeh (loc. no. 357)	1 ♀	<i>M. errans caucasicus</i>	<i>Maccevethus sp. (indistinguishable)</i>
Hoberlandt & Švihla (1990b)	Iran	N. Iran, Golhak near Tehran	1 ♂ 3 ♀♀	<i>M. errans caucasicus</i>	<i>M. caucasicus</i>
Hoberlandt & Švihla (1990b)	Iran	Tehran, Ghazvin (loc. no. 29)	1 ♂	<i>M. corsicus persicus</i>	<i>M. caucasicus</i>
Hoberlandt & Švihla (1990b)	Iran	Kerman, Mahan (loc. no. 183)	1 ♀	<i>M. corsicus persicus</i>	<i>Maccevethus sp. (indistinguishable)</i>
Hoberlandt & Švihla (1990b)	Iran	Fars, E. Zagros, 29 km. E. of Yassuj and 10 km. N. W. of Karun (loc. no. 245)	2 ♂♂	<i>M. corsicus persicus</i>	<i>M. caucasicus</i>
Hoberlandt & Švihla (1990b)	Iran	Fars, E. Zagros, 48 km. N. of Massirī, pass on the road Massirī – Yassuj [sic!] (loc. no. 238)	1 ♂	<i>M. corsicus persicus</i>	<i>M. caucasicus</i>
Hoberlandt & Švihla (1990b)	Iran	N. Iran, Gharaghādī	1 ♂	<i>M. corsicus persicus</i>	<i>not located in NMPC</i>
Hoberlandt & Švihla (1990b)	Iran	N. Iran, Golhak near Tehran	1 ♂	<i>M. corsicus persicus</i>	<i>M. caucasicus</i>

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Source	State	Locality (in original spelling)	No. of specimens	Original identification	Revised identification
HOBERLANDT & ŠVHLA (1990b)	Iran	N. Iran, Ghorogh	1 ♀	<i>M. corsicus</i> <i>persicus</i>	<i>Maccevethus</i> sp. (indistinguishable)
HOBERLANDT & ŠVHLA (1990b)	Iran	N. W. Iran, Ilam	1 ♀	<i>M. corsicus</i> <i>persicus</i>	<i>Maccevethus</i> sp. (indistinguishable)
<i>HOBERLANDT &amp; ŠVHLA</i> (1990b)	<i>Iran</i>	<i>N. Iran, Damavand</i>	<i>1 ♂</i>	<i>M. corsicus</i> <i>persicus</i>	<i>Maccevethus</i> sp. <i>not located in NMPC</i>
HOBERLANDT & ŠVHLA (1990b)	Iran	N. Iran, Karadj	1 ♀	<i>M. corsicus</i> <i>persicus</i>	<i>Maccevethus</i> sp. (indistinguishable)
STEHLIK & VAVRINOVÁ (1995)	Slovakia	Kováčov, 11.7.50 (Palásek lgr.)	3 ♂♂	<i>M. corsicus</i> <i>corsicus</i>	<i>M. caucasicus</i>
STEHLIK & VAVRINOVÁ (1995)	Slovakia	Burda	2 ♂♂ 19 ♀♀	<i>M. errans</i>	<i>M. caucasicus</i>
STEHLIK & VAVRINOVÁ (1995)	Slovakia	Kamenica n[ad] Hronom	2 ♂♂ 1 ♀	<i>M. errans</i>	<i>M. caucasicus</i>
STEHLIK & VAVRINOVÁ (1995)	Slovakia	Kováčov	11 ♂♂ 12 ♀♀	<i>M. errans</i>	<i>M. caucasicus</i>
STEHLIK & VAVRINOVÁ (1995)	Slovakia	Čajkov	1 ♀	<i>M. errans</i>	<i>M. caucasicus</i>
STEHLIK & VAVRINOVÁ (1995)	Slovakia	Štúrovo	4 ♂♂ 11 ♀♀	<i>M. errans</i>	<i>M. caucasicus</i>
STEHLIK & VAVRINOVÁ (1995)	Slovakia	Štúrovo, Modrý vršok	4 ♂♂ 1 ♀	<i>M. errans</i>	<i>M. caucasicus</i>
STEHLIK & VAVRINOVÁ (1995)	Slovakia	Šahy	4 ♂♂ 8 ♀♀	<i>M. errans</i>	<i>M. caucasicus</i>

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