

**First records of *Metapterus caspicus* from Greece (Hemiptera: Heteroptera:
Reduviidae: Emesinae)****První nálezy *Metapterus caspicus* z Řecka (Hemiptera: Heteroptera:
Reduviidae: Emesinae)**

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Abstract. The first two confirmed records of *Metapterus caspicus* Dohrn, 1863 from Greece are presented. The possibility of the occurrence of the related *M. linearis* A. Costa, 1862 in Greece is discussed, but, due to the lack of voucher specimens it should be excluded from the Greek fauna for the time being.

INTRODUCTION

The genus *Metapterus* A. Costa, 1862 belongs to the family Reduviidae, subfamily Emesinae, and tribe Metapterini. The genus includes two species, *Metapterus linearis* A. Costa, 1862 and *M. caspicus* Dohrn, 1863, distributed in southern and eastern Europe, the Middle East, Central Asia, and possibly also in North Africa (Putshkov & Putshkov 1996, Davidová-Vilímová & Kment 2003, Putshkov & Moulet 2010). Putoň (1880) synonymised *Emesa caspica* Dohrn, 1863, *Mantisoma aptera* Jakovlev, 1873 (both described from European Russia) and *Emesa dohrni* Douglas & Scott, 1868 (described from Jericho in Palestine) with *M. linearis*. This situation remained unchanged for a century, until Putshkov (1984) revised the genus *Metapterus* and recognized two distinct species: *M. caspicus* (with *Mantisoma aptera* as a junior synonym), and *M. linearis* (with *Emesa dohrni* as a supposed junior synonym) (cf. Putshkov & Putshkov 1996). However, the confusion of the species in the past seriously complicates the interpretation of earlier records, and the distribution of both *Metapterus* species remains poorly known (cf. Davidová-Vilímová & Kment 2003).

The occurrence of *Metapterus caspicus* has already been confirmed in the following countries: Europe – Austria (Melber et al. 1991), Bulgaria (Davidová-Vilímová & Kment 2003), Croatia (Gogala et al. 1990), France (Putshkov 1994, Putshkov & Moulet 2010), Hungary (Putshkov 1994), Italy (Tamanini 1962, as *M. linearis*; Rizzotti Vlach 1995; Bacchi & Rizzotti Vlach 1999), Macedonia (Protić 2010), Romania (Putshkov 1994), Russia (South European Territory) (Putshkov 1984), Slovakia (Davidová-Vilímová & Kment 2003), Slovenia (Gogala et al. 1990), Ukraine (Putshkov 1984, 1987); Transcaucasia – Azerbaijan (Putshkov 1984, 1987), and Georgia (Putshkov 1984, 1987). Putshkov & Putshkov (1996) predicted that records of *M. linearis* from Bosnia-Herzegovina probably also refer to *M. caspicus*; however, this has yet to be confirmed.

The presence of *Metapterus caspicus* in Greece have never been mentioned previously except for an obscure paper by Chicote (1882), listing *Mantisoma aptera*, a junior synonym of *M. caspicus*, from ‘Attica’. On the other hand, *M. linearis* has been listed several times

as member of the Greek fauna, however, always without an exact record (cf. Oshanin 1908; Stichel 1959, 1960; Josifov 1986; Putshkov & Putshkov 1996; Davidová-Vilímová & Kment 2003; Putshkov & Moulet 2010). In this paper *M. caspicus* is recorded from Central Greece based on two voucher specimens, confirming the species' presence in Greece.

RESULTS

Material examined: Greece: Beotia prefecture: Haliartus, 38°20'30.02"N, 23°04'29.97"E, 405 m a.s.l., 15.i.1985, 1 ♀ (apterous), S. Drosopoulos lgt., L. R. Davranoglou det. et coll. Thessaly: Ellassona: Road from Karya to Sykaminea, 39°58'24.85"N, 22°23'10.73"E, 844 m a.s.l., 28.iv.2011, 1 ♀ (apterous), L. R. Davranoglou lgt., det. et coll.

The first specimen was found in a mixed *Platanus* forest, in close proximity to Olvius River (also called Ksirerema) and the borders of the forest to the Kopaida valley. The microclimate of the locality is relatively humid, the area is covered by dense reeds and low vegetation, as well as plentiful plant debris and moss covered rocks. The specimen was collected from the base of reeds (*Phragmites australis*). The second specimen was sieved from a pile of damp, cut branches in a mixed, semi-improved natural pasture composed primarily of *Quercus coccifera*.

DISCUSSION

Biology. *Metapterus caspicus* is considered a univoltine species and the fact that the first specimen was collected in January confirms that it overwinters at least partly in the adult stage (Putshkov 1987, Putshkov & Moulet 2010). The specimens can apparently be collected on warm days even during the winter.

The habitat requirements of *M. caspicus* are relatively well known. It is generally a hygrophilous, Ponto-Mediterranean species (Putshkov & Moulet 2010). It is found in sandy, calcareous, muddy, flysch or saline substrates in well vegetated habitats from moist to relatively dry, with rich microfauna, on halophilous vegetation, in masses of dead grass, banks of ditches, tufts of weeds, under piles of cut branches, under plant debris and large stones, around salt lakes, on shores of artificial lakes, in steppes with feather grass, as well as on the surface of mammals burrows (voles, foxes) (Jakovlev 1873, Tamanini 1962, Putshkov 1987, Davidová-Vilímová & Kment 2003, Putshkov & Moulet 2010). Other authors (Rizzotti Vlach 1995) mention this species as xerothermic, found in plant debris among grass. In general *M. caspicus* tolerates drier habitats than *M. linearis*.

In Italy, *M. caspicus* was collected in microhabitats also inhabited by other Heteroptera, most notably *Alydus calcaratus* (Linnaeus, 1758), *Beosus maritimus* (Scopoli, 1763), *Coranus griseus* (Rossi, 1790), *Coreus marginatus* (Linnaeus, 1758), *Coriomeris affinis* (Herrich-Schäffer, 1839), *Eysarcoris ventralis* (Westwood, 1837), *Geocoris megacephalus* (Rossi, 1790), *Myrmus miriformis* (Fallén, 1807), *Oncocephalus* sp. (larva), *Sciocoris sulcatus* Fieber, 1851 and *Zicrona caerulea* (Linnaeus, 1758) (Bacchi & Rizzotti Vlach 1999).

The species has been associated with various plants, such as *Salix alba*, *Agropyron repens*, *Agrostis alba*, *Dactylis glomerata* (Tamanini 1962), *Poterium spinosum* (Dioli 1982), *Carex* spp., *Typha* sp. (Putshkov, 1984), *Stipa* spp., *Agropyron ruthenicum* (Putshkov 1987), *Spartium junceum* (Gogala et al. 1990) as well as various Fabaceae (Davidová-Vilímová 1997),

Poaceae, Cyperaceae (Bacchi & Rizzotti Vlach 1999), *Althaea*, *Artemisia*, *Chondrilla juncea*, *Cynanchum*, *Euphorbia*, *Paliurus*, *Populus*, *Phillyrea media*, *Reseda*, *Salix*, *Salsola*, *Xanthium* (Davidová-Vilímová & Kment 2003) and *Phragmites australis* (present paper).

It can be collected by sweeping the preferred vegetation, by sieving large accumulations of plant debris, or under stones, boards, tree bark etc. in appropriate habitats. Pitfall traps may produce good results (Bakonyi et al. 2002).

This species mainly feeds on Diptera species belonging to families such as Agromyzidae, Chloropidae, Chironomidae, Culicidae, Drosophilidae, Opomyzidae, Pipunculidae, Sciaridae, and Sepsidae, as well as small Heteroptera and Thysanura, using the 'sit and wait' feeding strategy for capturing its prey, usually at night (Bacchi & Rizzotti Vlach 1999, Putshkov & Moulet 2010).

Distribution in Greece. Apart from Chicote's (1882) record of *Mantisoma aptera*, there is no other published record of the genus *Metapterus* from Greece. Subsequent references listing *M. linearis* from Greece most probably refer to Chicote's record. Though Chicote's original specimen cannot be re-examined, the present records from Beotia and Thessaly suggest that it may indeed belong to *M. caspicus*.

On the other hand, there is no available record of *M. linearis* from Greece and the species should therefore be excluded from the list of Greek fauna for the time being. However, since *M. linearis* is a widely distributed species occurring all over southern Europe through to Transcaucasia into Central Asia (distribution reviewed by Davidová-Vilímová & Kment (2003)), its occurrence and future discovery in Greece is quite probable.

The confirmed occurrence of *M. caspicus* in Central Greece as well as in the neighboring countries (Bulgaria, Macedonia) suggests that this species might have a wider distribution in this country and the Balkans than previously thought. However, because of its restricted habitat preference, populations may be scattered in particular areas of Greece.

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REFERENCES

- BACCHI I. & RIZZOTTI VLACH M. 1999: Gardena insignis e Metapterus caspicus in Italia: Osservazioni faunisticoecologiche e biologiche (Heteroptera, Reduviidae). *Fragmenta Entomologica* **31**: 37–54.
- BAKONYI G., CSÖLLE C., FABÓK V., FÖLDESSY M., HUFNAGEL L., KONDOROSY E., RÉDEI D., TÖL-GYESINÉ-NELL T., VARGA I. & VÁSÁRHELYI T. 2002: The Heteroptera fauna of the Fertő-Hanság National Park. Pp. 325–350. In: MAHUNKA S. (ed.): *The Fauna of the Fertő-Hanság National Park, I–II*. Magyar Természettudományi Múzeum, Budapest, 829 pp.
- CHICOTE D. C. 1882: Notice sur quelques Hémiptères de la Grèce. *Annales de la Société Entomologique de Belgique* **26**: 89–90.
- DAVIDOVÁ-VILÍMOVÁ J. 1997: First report of *Metapterus linearis* from Slovakia (Heteroptera: Reduviidae: Emesinae). *Klapalekiana* **33**: 1–4.
- DAVIDOVÁ-VILÍMOVÁ J. & KMENT P. 2003: Review of the distribution and habitat preference of the genus *Metapterus* (Heteroptera: Reduviidae). *Acta Societatis Zoologica Bohemica* **67**: 181–196.
- DIOLI P. 1982: Eterotteri del Friuli-Venezia Giulia 2. Interessanti Emesini dei dintorni di Grado (Hemiptera, Heteroptera). *Atti del Museo Friulano di Storia Naturale* **3**: 235–244.

- DROSOPOULOS S. 1980: Hemipterological studies in Greece. Part I. Heteroptera. A catalogue of the reported species. *Biologia Gallo-Hellenica* **9**: 163–185.
- GOGALA A., GOGALA M. & GÜNTHER H. 1990: New records of *Gardena insignis* Horváth, 1887 (Emesinae, Reduviidae) in Istria (Yugoslavia). *Scopolia, Supplementum* **1**: 65–68.
- JAKOVLEV V. E. 1873: Materialy dlya entomologicheskoy fauny Evropeyskoy Rossii. I–III. [Contributions to the entomological fauna of European Russia. I–III]. *Trudy Russkogo Entomologicheskogo Obshchestva* **7**: 7–43 (in Russian and German).
- JOSIFOV M. 1986: Verzeichnis der von der Balkanhalbinsel bekannten Heteropterenarten (Insecta, Heteroptera). *Faunistische Abhandlungen des Staatlichen Museums für Tierkunde Dresden* **14**: 61–93.
- MELBER A., GÜNTHER H. & RIEGER Ch. 1991: Die Wanzenfauna des Österreichischen Neusiedlerseegebietes (Insecta, Heteroptera). *Wissenschaftliche Arbeiten aus dem Burgenland* **89**: 63–192.
- OSHANIN B. 1908: Verzeichnis der Palaearktischen Hemipteren mit besonderer Berücksichtigung ihrer Verteilung im Russischen Reiche. I. Band Heteroptera. II. Lieferung Tingididae – Acanthiidae. *Ezhagodnik Zoologicheskago Muzeya Imperatorskoy Akademii Nauk* **13**: 395–586.
- PROTIĆ Lj. 2010: Assassin bugs (Insecta: Heteroptera: Reduviidae) in collections of the Natural History Museum in Belgrade. *Bulletin of the Natural History Museum* **3**: 141–159.
- PUTON A. 1880: *Synopsis des Hémiptères-Hétéroptères de France. 3e partie. Reduviides, Saldides, Hydrocorises*. Remiremont, Paris, pp. 161–245.
- PUTSHKOV P. V. 1984: Vidy roda *Metapterus* Costa (Heteroptera, Reduviidae) fauny SSSR. (Species of the genus *Metapterus* Costa (Heteroptera, Reduviidae) of the fauna of the USSR). *Entomologicheskoe Obozrenie* **63**: 737–741 (in Russian, English summary).
- PUTSHKOV P. V. 1987: *Khishchnetsy. Fauna Ukrainy, Tom 21 – Poluzhestkokrylye, Vypusk 5*. [Assassin bugs. Fauna of Ukraine, Vol. 21 – Hemiptera, Part 5]. Naukova Dumka, Kiyv, 245 pp. (in Russian).
- PUTSHKOV P. V. 1994: Réduviides de la faune de France, notes sur six espèces (Heteroptera, Reduviidae). *Bulletin de la Société Entomologique de France* **99**: 471–481.
- PUTSHKOV P. V. & PUTSHKOV V. G. 1996: Family Reduviidae Latreille, 1807 – assassin-bugs. Pp. 148–265. In: AUKEMA B. & RIEGER Ch. (eds): *Catalogue of the Heteroptera of the Palaearctic Region. Vol. 2, Cimicomorpha I*. The Netherlands Entomological Society, Amsterdam, xiv + 360 pp.
- PUTSHKOV P. V. & MOULET P. 2010: *Hémiptères Reduviidae d'Europe occidentale. Faune de France et régions limitrophes. Vol. 92*. Fédération Française des Sociétés de Sciences Naturelles, Paris, 668 pp. + 24 pls.
- RIZZOTTI VLACH M. 1995: Popolamenti ad Eterotteri della Valpolicella (Veneto, regione Veronese). *Memorie della Società Entomologica Italiana* **73** (1994): 59–152.
- STICHEL W. 1959: *Illustrierte Bestimmungstabellen der Wanzen. II. Europa (Hemiptera-Heteroptera Europae)*. 3.6. *Cimicomorpha, Reduviidae, Nabidae*. W. Stichel, Berlin, pp. 81–206.
- STICHEL W. 1960: *Illustrierte Bestimmungstabellen der Wanzen. II. Europa (Hemiptera-Heteroptera Europae)*. 3.12. *Liste der Paläarktischen Arten, Cimicomorpha*. W. Stichel, Berlin, pp. 364–381.
- TAMANINI L. 1962: Interessanti reperti emittorologici nella Pianura Padano-Veneta (Heteroptera: Reduviidae et Lygaeidae). *Memorie del Museo Civico di Storia Naturale di Verona* **10**: 243–249.
- WYGODZINSKY P. W. 1966: A monograph of the Emesinae (Reduviidae, Hemiptera). *Bulletin of the American Museum of Natural History* **133**: 1–614.

SOUHRN

Tento příspěvek přináší první dva doložené údaje o výskytu zákeřnice *Metapterus caspicus* Dohrn, 1863 (Reduviidae: Emesinae) v Řecku. Je diskutována možnost výskytu dalšího druhu, *M. linearis* A. Costa, 1862, který z Řecka uváděla celá řada autorů, avšak bez konkrétního nálezu. Tyto údaje s největší pravděpodobností vycházely z práce Chicoteho (1882), který zmiňuje z Řecka druh *Mantisoma aptera* Jakovlev, 1873, původně synonymizovaný s *M. inearis*, který však po revizi Putshkova (1984) náleží jako mladší synonymum k revalidovanému druhu *M. caspicus*. Vzhledem k absenci potvrzeného údaje je *M. linearis* prozatím vyřazen ze seznamu řecké fauny.