

Data to the Psocoptera fauna of Balkan Peninsula and two Aegean islands

GYÖRGY SZIRÁKI

ABSTRACT: About 130 Psocoptera specimens belonging 32 species were determined from the given territory. *Valenzuela flavidus*, *Valenzuela piceus*, *Graphopsocus cruciatus*, *Stenopsocus immaculatus*, *Ectopsocus meridionalis*, *Elipsocus moebiusi*, *Mesopsocus duboscqui*, *Amphigerontia contaminata*, *Blaste conspurcata*, *Blaste quadrimaculata*, *Neopsocus rhenanus*, *Psococerastis gibbosa*, *Trichadenotenum sexpunctatum* are new to the fauna of Albania, *Stenopsocus immaculatus*, *Peripsocus alboguttatus*, *Peripsocus phaeopterus*, *Peripsocus subfasciatus* new to Bulgaria, *Peripsocus phaeopterus*, *Philotarsus picicornis*, *Mesopsocus unipunctatus*, *Blaste quadrimaculata*, *Hyalopsocus contrarius* new to Greece, *Amphigerontia contaminata* new to Macedonia, *Neopsocus rhenanus* new to Montenegro, *Valenzuela gynapterus* and *Stenopsocus immaculatus* new to the fauna of Serbia. *Valenzuela gynapterus* was not reported earlier from any countries of the Balkan Peninsula. Regarding a few features, the Albanian specimens of *Mesopsocus duboscqui* are somewhat different from the usual form.

Introduction

Between the years 2003 and 2013 in different Balkan countries a number of collecting trips were carried out by entomologists, botanists and other specialist of the Hungarian Natural History Museum, Budapest (HNHM), and other institutions. Psocoptera specimens collected by them are deposited in HNHM. Mainly because of our insufficient knowledge in this respect – especially in the case of Albania and Bulgaria – a considerable part of the determined species was new to the fauna of one or more countries.

In the present paper the Balkan Peninsula is regarded in the sense of physical geography, therefore material from the territories south of rivers Sava and Danube is treated only. When making zoogeographical remarks data of GÜNTHER & KALINOVIC (1977), GÜNTHER (1980), LIENHARD (1998) and LIENHARD & SMITHERS (2002) were considered.

The names of collectors are given in the following abbreviations: AH = András Hunyadi, ÁE = Árpád Ecsedi, DM = Dávid Murányi, GP = Gellért Puskás, JK = Jenő Kotschán, KB = Krisztina Balogh, KH = Krisztián Harnos, KO = Kiril Orci, LD = László Dányi, MF = Mihály Földvári, SZCZ = Szilvia Czigány, TD = Tamás Deli, TH = Tamás Huszár, TISZ = Tímea Szederjesi, TK = Tibor Kovács, TSZ = Tamás Szűcs, ZE = Zoltán Eröss, ZF = Zoltán Fehér, ZSU = Zsolt Ujvári.

Annotated list of the determined species

CAECILIUSIDAE Kolbe, 1880

Valenzuela burmeisteri (Brauer, 1876) – **Bulgaria:** Pirin Mts., at the left side branch of Bregovitsa Stream, 08.10.2011, 1 ♂, 2 ♀, ÁE, TK & GP; Vitosha Mts., 5.5 km E of Marchevo,

03.10.2011, 2 ♀, ÁE, TK & GP; **Montenegro**: Visitor Mts., at side branch of Dosova Stream, 12.10.2008, 1 ♂, LD, ZF, JK & DM.

Holarctic species; it is rather frequent in the arboreal zone of Europe.

Valenzuela despaxi (Badonnel, 1936) – **Bulgaria**: Rila Mts., Rilomanastirska Gora Reserve, 06.09.2005, 1 ♂, DM, JK, MF & TSZ; Vitosa Mts., 3.5 km SE of Vladaya, 03.10.2011, 1 ♀, ÁE, TK & GP, same data but 4.5 km E of Vladaya, 2 ♀.

Known from large part of Europe and from Mongolia.

Valenzuela flavidus (Stephens, 1836) – **Albania**: Malësi e Madhe District, Madhe Mts., Lepushë, 04.10.2011, 1 ♀, TD, ZE, ZF & DM; Mat District, Ura e Vashës, 09.10.2004, 2 ♀, ZF, JK & DM; Tropoja District, Lëkurtaj, 07.10.2005, 2 ♂, TD, ZE, ZF & DM; Tropoja District, Prokletije Mts., Rrogan, 06.10.2005, 1 ♀, TD, ZE, ZF & DM; **Bulgaria**: Rila Mts., at Drushlevitsa Stream, 07.10.2011, 1 ♀, ÁE, TK & GP; Rila Mts., Tiha Rila, 06.09.2005, 1 specimen, DM, JK, MF & TSZ; Vitosha Mts., at Dragalevska Stream, 04.10.2011, 1 ♀, ÁE, TK & GP; **Montenegro**: Plav Municipality, Rugovo Mt., Velika, 05.10.2005, 1 ♂, TD, ZE, ZF & DM.

Holarctic species; it is very frequent in most countries of Europe. New to the fauna of Albania.

Valenzuela gynapterus (Tetens, 1891) – **Serbia**: Zlatibor Mts. near Vodice, 15.10.2008, 7 ♀, LD, ZF, JK & DM.

It has a scattered distribution; known from several countries of Europe and from Mongolie. No earlier data from the Balkan Peninsula, new to the fauna of Serbia.

Valenzuela piceus (Kolbe, 1882) – **Albania**: Gjirokastra District, 4 km SW of Poliçan, 12.10.2004, 1 ♀, ZF, JK & DM.

Videly distributed in Europe, however, usually moderately frequent. New to the fauna of Albania.

STENOPSOCIDAE Enderlein, 1901

Graphopsocus cruciatus (Linnaeus, 1768) – **Albania**: Berat District, at the River Osum, 28.05.2004, 1 ♂, KB & DM; Berat District, Tomorr Mts., valley of Vodice Stream, 06.05.2004, 1 ♀, KB & DM; Kukës District, Pezë Mts., 08.10.2005, 1 ♂, TD, ZE, ZF & DM; Mat District, gorge of Lumi i Matit, 08.10.2004, 1 ♂, ZF, JK & DM; Mat District, gorge Lumi i Matit, Ura e Vashës, 09.10.2004, 2 ♀, ZF, JK & DM; Skrapar District, 2.3 km NE of Çorovodë, 10.10.2004, 1 ♀, ZF, JK & DM; Tepelena District, 7 km S of Tepelena, 12.10.2004, 1 ♂, ZF, JK & DM; **Kosovo**: Pejë Municipality, Rugova Mts., Bjeluhë, 05.10.2005, 1 ♀, TD, ZE, ZF & DM; **Montenegro**: Komovi Mts., Mokro, 13.10.2008, 1 ♀, LD, ZF, JK & DM; Sinajevina Mts., Gornji Lipovo, 11.10.2008, 1 ♀, LD, ZF, JK & DM; Sinajevina Mts., Redice, 10.10.2008, 1 ♀, LD, ZF, JK & DM.

Widespread Holarctic species which occurs sporadically – probably as introduced insect – in almost all of the other zoogeographical regions. New to the fauna of Albania.

Stenopsocus immaculatus (Stephens, 1836) – **Albania**: Berat District, Tomorr Mts., valley of Krakanjosi Stream, 25.05.2004, 1 ♂, KB, KH & DM; Malësi e Madhe District, Madhe Mts., Vermosh, 04.10.2005, 1 ♂, TD, ZE, ZF & DM; **Bulgaria**: Rila Mts., at Drushlevitsa Stream, 07.10.2011, 1 ♂, ÁE, TK & GP; Stara Planina, Stidovska Mt., Gradec, 05.09.2005, 3 ♀, DM, JK, MF & TSZ; **Macedonia**: Jakupica Mts., Kapinovo, 19.10.2006, 2 ♀, LD, JK & DM; Ogražden Mts., Pervedna Pass, 18.10.2006, 1 ♀, LD, JK & DM; Šar Planina, Gorno Jelovce, 15.10.2006, 2 ♀, LD, JK & DM; **Serbia**: Krajište Mts., Vučedelce, 20.10.2006, 1 ♀, LD, JK & DM.

It is known from many countries of Europe and from Mongolie, being more abundant in the cooler territories. New to the fauna of Albania, Bulgaria and Serbia.

Stenopsocus lachlani Kolbe, 1880 – **Bosnia-Hercegovina**: Jahorina Mts., Vrhpraca, 05.10.2007, 1 ♂, LD, JK & DM; **Bulgaria**: Rila Mts., 0.5 km SW of Borovets, 05.10.2011, 1 ♂, ÁE, TK & GP.

Occurs in arboreal territories of Europe, mostly on coniferous trees.

Stenopsocus stigmaticus (Imhoff & Labram, 1845) – **Montenegro**: Visitor Mts., at sidebranch of Desova Stream, 15.10.2008, 1 ♂, LD, ZF, JK & DM.

It is a moderately frequent species in the arboreal zone of Europe, mostly on deciduous trees. Occurs in Mongolie also.

ECTOPSOCIDAE Roesler, 1944

Ectopsocus briggsi McLachlan, 1899 – **Serbia**: Derdap Mts., Lepenski Vir, 28.10.2010, 1 ♀, LD, JK & ZSU.

Cosmopolitan, but rather thermofil species.

Ectopsocus meridionalis Ribaga, 1903 – **Albania**: Mat District, Ura e Vashës, 09.10.2004, 1 ♀, ZF, JK & DM.

Occurs in most of the zoogeographical regions of the world, but – because of its thermofily – absent from the cooler territories. New to the fauna of Albania.

PERIPSOCIDAE Kolbe, 1880

Peripsocus alboguttatus (Dalman, 1823) – **Bulgaria**: Stara Planina, Varbishka Mts., Medven, 04-05.09.2005, 1 ♀, DM, JK, MF & TSZ.

Widespread Holarctic species. New to the fauna of Bulgaria.

Peripsocus phaeopterus (Stephens, 1836) – **Bulgaria**: Vitosha Mts., 3.5 km SE of Vladya, 03.10.2011, 2 ♂, 1 ♀, ÁE, TK & GP; **Greece**: Rhodes, Epta Piges, 10.11.2012, 1 ♀, JK & DM; Rhodes, Salakos, 10.11.2012, 4 ♀, JK & DM; Rhodes, Vati, 08.11.2012, 1 ♀, JK & DM.

A widely distributed psocid in the arboreal zone of Palearctic Region, and probably introduced to Canada. New to the fauna of Bulgaria and Greece.

Peripsocus subfasciatus (Rambur, 1842) – **Bulgaria**: Stara Planina, Stidovska Mt., Gradec, 05.09.2005, 1 ♀, DM, JK, MF & TSZ.

Fundamentally a Holarctic species, occurring also in northern part of Neotropic Region. It prefers the habitats with humid microclimate. New to the fauna of Bulgaria.

ELIPSOCIDAE Karny, 1930

Elipsocus abdominalis Reuter, 1904 – **Greece**: Crete, Lashiti Regional Unit, Thriptis Mts., Agios Ioannis, 05.04.2013, 1 ♀, JK, DM & TISZ.

It is known from the most countries of Western Palearctic and from North America.

Elipsocus annulatus Roesler, 1954 – **Greece**: Rhodes, Vati, 08.11.2012, 1 ♀, JK & DM.

Rather rare species, occurring only in a few countries of South and Central Europe.

Elipsocus moebiusi Tetens, 1891 – **Albania**: Mat District, 5 km E of Qafa e Shtamës, 08.10.2004, 1 ♂, 4 ♀, ZF, JK & DM; **Macedonia**: Demir Kapija, bank of the Vardar River, 17.10.2006, 1 ♀, LD, JK & DM; Pelista Mts., Niže Pole, 17.10.2006, 1 ♀, LD, JK & DM.

Moderately frequent species in arboreal territories of Europe, and occurs – probably as introduced psocid – in Canada also. New to the fauna of Albania.

Hemineura dispar Tetens, 1891 – **Bulgaria**: Pirin Mts., at the left side branch of Bregovitsa Stream, 08.10.2011, 2 ♀, ÁE, TK & GP.

Distributed in northern part and mountainy territories of Europe.

PHILOTARSIDAE Pearman, 1936

Philotarsus picicornis (Fabricius, 1793) – **Bulgaria**: Rila Mts., at Kriva Stream, 06.10.2011, 1 ♀, ÁE, TK & GP; **Greece**: Rhodes, Salakos, 10.11.2012, 5 ♀, JK & DM.

Holarctic arboreal species. New to the fauna of Greece.

MESOPSOCIDAE Enderlein, 1901

Cyrtopsochus nasutus (Enderlein, 1907) – **Greece**: Rhodes, Kattavia, Oros Hill, 08.11.2012, 1 ♀, JK & DM.

Hitherto it was known only from Morocco, Tunisia, Cyprus, Israel, as well as from the islands Samos and Ikaria of Greece.

Mesopsocus duboscqui Badonnel, 1938 – **Albania**: Shkodra District, Laç Qyrsaç, 08.03.2008, 3 ♂, 1 ♀, SZCZ & DM; **Greece**: Arkadia County, Magouliana, 06.04.2009, 2 ♂, 1 ♀, LD, JK & DM; Larissa County, Ossa Mts., 09.04.2009, 1 ♀, LD, JK & DM.

Known from a few mediterranean countries. New to the fauna of Albania.

Remark: In the case of the Albanian specimens the index $t1/(t2+t3)$ of female: 1.66, while IO/D of males: 1.8, 1.86 and 2.0. These rates are somewhat larger than usual (Lienhard 1998). Besides, the arms of the V-shaped dark pattern of female subgenital plate are interrupted distinctly before its parts curving laterally. However, accepting opinion of Dr. Charles Lienhard, the intraspecific variability of the biometric data might be larger than it was known

earlier, while the alteration of the dark pattern of female subgenital pattern probable is an individual aberration.

Mesopsocus unipunctatus (Müller, 1764) – **Greece:** Drama County, Dit-Rodopi Mts., S of Elatia, 01.04.2007, 2 ♂, LD, ZE, ZF, JK & DM.

Widespread arboreal Holarctic species. New to the fauna of Greece.

PSOCIDAE Stephens, 1829

Amphigerontia contaminata (Stephens, 1836) – **Albania:** Kukës District, Skevicë, 09.10.2005, 2 ♀, TD, ZE, ZF & DM; Mat District, Dejë Mt., Varoshit, 11.10.2005, 2 ♀, TD, ZE, ZF & DM; **Greece:** Crete, Lashiti Regional Unit, Thriptis Mts., Agios Ioannis, 05.04.2013, 6 ♀, JK, DM & TISZ; Rhodes, Vati, 08.11.2012, 1 ♀, JK & DM; **Macedonia:** Plačkovica Mt., Gradec, 19.10.2006, 1 ♂, 2 ♀, LD, JK & DM.

Widely distributed in Palaearctic Region and occurs (probably introduced) in Canada also. New to the fauna of Albania and Macedonia.

Blaste conspurcata (Rambur, 1842) – **Albania:** Pogradec District, Pishkupa, shore of Ohrid Lake, 30.06.2003, 1 ♀, ZE, ZF, JK & DM.

Distributed in West Palaearctics and in Mongolia. New to the fauna of Albania.

Blaste quadrimaculata (Latreille, 1794) – **Albania:** Mallakastra District, S of Gerishicë, 11.10.2004, 1 ♀, ZF, JK & DM; Mat District, Ura e Vashës, 09.10.2004, 2 ♀, ZF, JK & DM; **Greece:** Rhodes, Epta Piges, 10.11.2012, 2 ♀, JK & DM.

It has a scattered area in West Palaearctics. New to the fauna of Albania and Greece.

Neopsocus rhenanus Kolbe, 1882 – **Albania:** Gjirokastra District, 5 km NE of Suhë, 12.10.2004, 1 ♂, ZF, JK & DM; Skrapar District, Tomorr Mts., Radesh, 22.08.2006, 2 ♂, 4 ♀, ZF, AH, TH & DM; **Bulgaria:** Varna Region, Pobitite Kamani, near to Beloslav, 02-04.09.2005, 2 ♀, DM, JK, MF & TSZ; **Montenegro:** Rumija Mts., near to Stari Bar, 14.10.2008, 2 ♂, 1 ♀, LD, ZF, JK & DM.

A rather rare species, known from several countries of Europe. New to the fauna of Albania and Montenegro.

Psococerastis gibbosa (Sulzer, 1776) – **Albania:** Kolonja District, Grammos Mts., Leskovik, 03.07.2003, 1 ♀, ZE, ZF, JK & DM.

A widely distributed Palaearctic species which prefer the damp habitats. It is new to the fauna of Albania.

Metylophorus nebulosus (Stephens, 1836) – **Macedonia:** Skopska Crna Gora, Banjane, 20.10.2006, 1 ♀, LD, JK & DM.

A rather frequent species in the Palaearctic Region.

Hyalopsocus contrarius (Reuter, 1893) – **Greece:** Rhodes, Epta Piges, 10.11.2012, 1 ♀, JK & DM.

It is known from several – mostly extra-Mediterranean – countries of Europe and from Mongolie. No data from the Balkan Peninsula. New to the fauna of Greece.

Loensia variegata (Latreille, 1799) – **Greece**: Karpathos, Aperi, 11.11.2012, 1 ♀, JK & DM; Rhodes, Haraki, 14.11.2012, 1 ♀, JK & DM.
Widely distributed species in Europe.

Oreopsocus montanus (Kolbe, 1884) – **Greece**: Rhodes, Epta Piges, 10.11.2012, 1 ♀, JK & DM.
It is known from several countries of Central and South Europe.

Trichadenotecnum sexpunctatum (Linnaeus, 1761) – **Albania**: Mat District, Dejë Mt., Varoshit, 11.10.2005, 1 ♂, TD, ZE, ZF & DM.
Widely distributed psocid in Europe. New to the fauna of Albania.

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György SZIRÁKI
Hungarian Natural History Museum
H-1088 BUDAPEST, Hungary
Baross u. 13.
E-mail: sziraki@zoo.zoo.nhmus.hu