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Fauna of Sarnena Sredna Gora Mts, Part 1
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Study on the Psocoptera fauna of Sarnena Gora Mts.

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Abstract. The material was collected between 2017 and 2020 during all seasons. Following methods were used: 1. Actively searched in proper habitats, and collected by wet brush; 2. Sieving with 1 mm mesh width sieve of detritus or crushed tree bark particles above white plastic container; 3. Beating the vegetation above white plastic container; 4. Checking for dead individuals in spider webs or paddles full with water; 5. Sweep netting of vegetation; 6. Trapping by white plastic containers placed below lamps. There were 9 species of Psocoptera known from Sarnena Gora Mts. till present study. After the detailed research a total of 35 species of Psocoptera are known to occur in the area (26 newly recorded species). The species *Ectopsocus petersi* was a new record for Bulgaria.

Key words: Insecta, Psocoptera, localities.

Introduction

There were 9 species of Psocoptera known from Sarnena Gora Mts., all reported by the author (Georgiev 2016, 2017a, 2017b, 2018): *Lepinotus reticulatus* Enderlein, 1905, *Lepinotus inquilinus* Heyden, 1850, *Liposcelis bostrychophila* Badonnel, 1931, *Liposcelis pearmani* Lienhard, 1990, *Liposcelis priesneri* Enderlein, 1925, *Liposcelis silvarum* (Kolbe, 1888), *Lachesilla bernardi* Badonnel, 1938, *Ectopsocus vachoni* Badonnel, 1945, and *Cuneopalpus cyanops* (Rostock, 1876).

Here I summarize all published data and present some new records of barkfly species and their localities in this area.

Material and Methods

The material was collected between 2016 and 2020 by following methods: 1. Actively searched in proper habitats, and collected by wet brush; 2. Sieving with 1 mm mesh width sieve of detritus or crushed tree bark particles above white plastic container; 3. Beating the vegetation above white plastic container; 4. Checking for dead individuals in spider webs or paddles full with water (Fig. 1); 5. Sweep netting of vegetation; 6. Trapping by white plastic containers placed below lamps. Specimens were then stored in ethanol and after processing, deposited in the collection of the author. Most of the material was collected by the author. Some samples were provided and by Assist. Prof. Miroslav Antov (Plovdiv University), which is mentioned in the text.

Species identification and taxonomical order follow Lienhard (1998) and Lienhard & Smithers (2002). As a supporting source, Saville (2008) was also used.

Fig. 1. One of the richest collecting sites (natural water trap): rock paddles, N of Nova Zagora town, E of Kriva Krusha vill. (picture taken on 4.6.2020).

Results

A total of 35 species of Psocoptera are known to occur in Sarnena Gora Mts. after this study:

Trogiidae

***Lepinotus reticulatus* Enderlein, 1905**

Reported by Georgiev (2016): "*24.09.2016, Bulgaria, Sarnena Gora Mts., S slope, E of Stara Zagora city, near Hrishteni village, Pine plantation (Pinus nigra), N42 28 02.7 E25 42 59.0, 306 m a.s.l., in detritus (decaying needles and small brunches of Pinus nigra), 1 ♀, collected by sieving.*"

Other material examined: 22.9.2016, Hrishteni village, yard of a house, in detritus of *Corylus avellana*, N42 27 12.56 E25 42 17.89, 231 m a.s.l., 1 ♀, collected by sieving; 9.3.2017, same locality, in a room in house, 1 ♀, on a laptop; 24.9.2016, E of Hrishteni vill., grass and bush area at the periphery of agricultural lands, grass detritus under *Rosa* sp., N42 27 38.3 E25 43 07.9, 234 m a.s.l., 2 ♀, 1 nymph, collected by sieving; 6.10.2016, near Trakia University, *Pinus nigra* plantation, dry trunk of *P. nigra*, 1 ♀, 2 nymphs, collected by sieving; 10.4.2017, S of Kolena vill., Medven Hill, the area at the peak, grass and bush *Paliurus spina-christi*, detritus at the base of a rock, N42 27 13.6 E25 43 55.0, 283 m a.s.l., 1 ♀, collected by sieving; 10.4.2017, S of Kolena vill., Medven Hill, mixed forest, in a dead trunk of *Pinus nigra*, N42 27 19.4 E25 43 53.7, 249 m a.s.l., 1 ♀, collected by sieving; 16.5.2017, N of Stara Zagora city, near Bedechka River, river bank forest, in a dead trunk of *Cerasus sativa*, N42 27 06.9 E25 37 54.8, 227 m a.s.l., 1 ♀, collected by sieving; 4.9.2017, Stara Zagora city, park forest, brunches of *Cedrus* sp., N42 26 12.7 E25 38 19.1, 300 m a.s.l., 1 ♀, collected by beating the vegetation; 7.6.2018, near the path to Moruley Peak, *Pinus sylvestris* plantation, ant nest, N42 32 06.3 E25 45 44.9, 696 m a.s.l., 2 ♀, collected

by sieving; 28.5.2018, near Beter Peak, *Quercus* sp. forest, ant nest, N42 30 46.4 E25 37 46.6, 789 m a.s.l., 2 ♀, collected by sieving; 29.4.2020, Hadzhiolova Koria Hill, W of Hrishteni vill., abandoned yard, bark of dry *Malus domestica*, N42 27 01.4 E25 41 47.7, 241 m a.s.l., 1 ♀, collected by sieving.

***Lepinotus inquilinus* Heyden, 1850**

Reported by Georgiev (2017b): "*22.9.2016, Hrishteni village, yard of a house, in detritus of Corylus avellana, N42 27 12.56 E25 42 17.89, 231 m a.s.l., 1 ♀, collected by sieving.*"

Psyllipsocidae

***Psyllipsocus ramburii* Selys-Longchamps, 1872**

Material examined: 17.9.2016, Hrishteni village, house, N42 27 12.99 E25 42 18.54, 231 m a.s.l., 1 ♀, micropterous, on wall; 8.10.2016, same locality, in toilet, 1 ♀, micropterous, found drinking water from a drop in a sink (Fig. 2); 22.5.2017, same locality, in storeroom, 1 ♀, micropterous, on stored potatoes.

Fig. 2. *Psyllipsocus ramburii*, drinking water from a drop in a sink, a house in Hrishteni vill.

Liposcelididae

***Liposcelis bostrychophila* Badonnel, 1931**

Reported by Georgiev (2017b): "*26.3.2017, south of Kolena village, below Medven Peak, Quercus spp. and Carpinus orientalis forest, in detritus of Quercus sp., N42 27 06.4 E25 43 51.9, 222 m a. s. l., 1 ♀, collected by sieving.*"

Other material examined: 10.4.2017, south of Kolena village, Medven Hill, bushes dominated by *Quercus* sp., *Carpinus orientalis* and *Paliurus spina-christi*, dead trunk of *Quercus* sp., N42 27 22.7 E25 43 52.5, 206 m a.s.l., 2 ♀, collected by sieving; same date and area, in dead trunk of *Fraxinus* sp., N42 27 15.0 E25 43 56.8, 272 m a.s.l., 1♀, collected by sieving; 29.4.2020, Hadzhiolova Koria Hill, W of Hrishteni vill., abandoned yard, bark of dry *Malus domestica*, N42 27 01.4 E25 41 47.7, 241 m a.s.l., 1 ♀, collected by sieving.

***Liposcelis corrodens* (Heymons, 1909)**

Material examined: 26.5.2018, S of Shanovo vill., meadows with bushes and trees, in bark of live *Quercus* sp., N42 31 52.1 E25 38 42.7, 424 m a.s.l., 1♀, collected by sieving; 29.4.2020, Hadzhiolova Koria Hill, W of Hrishteni vill., abandoned yard, bark of dry *Malus domestica*, N42 27 01.4 E25 41 47.7, 241 m a.s.l., 1 ♀, collected by sieving; 17.5.2020, near Kavaklyika Hut, mixed forest: *Fagus sylvatica*, *Picea abies* and *Pinus sylvestris*, in bark of dead trunk of *Picea abies*, N42 29 08.0 E25 13 35.3, 903 m a.s.l., 1♀, collected by sieving.

***Liposcelis decolor* (Pearman, 1925)**

Material examined: 18.9.2016, Hrishteni village, house, N42 27 12.99 E25 42 18.54, 231 m a.s.l., 1 ♀, in a room; 13.6.2018, same locality, outside the house, 1 ♀, under light.

***Liposcelis pearmani* Lienhard, 1990**

Reported by Georgiev (2017a): "*24.9.2016, East of Hrishteni village, Pinus nigra plantation, pine detritus and dead wood, 42°28'02.7"N 25°42'59.0"E, 306 m a.s.l., 1* ♀."

Other material examined: 26.3.2017, S of Kolena vill., *Quercus* sp. and *Carpinus orientalis* forest, detritus and a dead trunk of *Quercus* sp., N42 27 06.4 E25 43 51.9, 222 m a.s.l., 2 ♀, collected by sieving; 10.4.2017, S of Kolena vill., *Quercus* sp. and *Carpinus orientalis* forest, trunk of *Fraxinus* sp., N42 27 15.0 E25 43 56.8, 272 m a.s.l., 1 ♀, collected by sieving; 21.4.2017, Hrishteni village, in a barn, among old stored grain, N42 27 13.08 E25 42 19.37, 231 m a.s.l., 2 ♀, collected by sieving; 23.5.2017, N of Kolena vill., *Quercus* sp. and *Carpinus orientalis* forest, trunk of *Juglans regia*, N42 29 12.2 E25 43 21.6, 287 m a.s.l., 1 ♀, collected by sieving; 11. and 13.6.2018, Hrishteni village, under light, N42 27 12.79 E25 42 18.47, 231 m a.s.l., 3 ♀, collected by white plastic collectors under light; 7.6.2018, near the path to Moruley Peak, *Pinus silvestris* forest, in ant nest, N42 32 06.3 E25 45 44.9, 696 m a.s.l., 1 ♀, collected by sieving; 28.5.2018, near Beter Peak, *Quercus* sp. forest, in ant nest, N42 30 46.4 E25 37 46.6, 789 m a.s.l., 1 ♀, collected by sieving.

***Liposcelis priesneri* Enderlein, 1925**

Reported by Georgiev (2017a): "*22.9.2016, Hrishteni village, yard of a house, detritus beneath Corylus avellana, N42 27 12.56 E25 42 17.89, 231 m a.s.l., 2* ♀."

***Liposcelis silvarum* (Kolbe, 1888)**

Reported by Georgiev (2017a): "*pine forest near Trakia University (W of Stara Zagora city, additional record)*". The accurate collection data is: 6.10.2016, near Trakia University, *Pinus nigra* plantation, dead trunk of *Pinus nigra*, N42 24 08.4 E25 34 08.0, 298 m a.s.l., 3 ♀, collected by sieving.

Epipsocidae

***Bertkauia lucifuga* (Rambur, 1842)**

Material examined: 19.9.2018, near Borilovo vill., small meadows with various bushes and trees, in detritus of *Juglans regia*, N42 28 46.8 E25 33 56.2, 429 m a.s.l., 1 ♀, 1 nymph, collected by sieving.

Caeciliusidae

***Valenzuela flavidus* (Stephens, 1836)**

Material examined: 22.6.2018 and 7.8.2018, Hrishteni village, yard of a house, N42 27 12.7 E25 42 18.9, 230 m a.s.l., 2♀, collected by trapping with plastic containers below lamp during the night; 2.7.2018, W of Yagoda vill., grass and bushes, from various bush species, N42 32 20.8 E25 33 34.7, 290 m a.s.l., 1♀, collected by beating the vegetation; 5.7.2018, E of Edrevo vill., bushes and trees, brunches of *Quercus* sp., N42 35 37.1 E25 49 14.2, 303 m a.s.l.,1♀, collected by beating the vegetation; 5.7.2018, E of Panicherevo vill., near Zhrebchevo Dam, N42 35 37.7 E25 51 46.5, 261 m a.s.l., 1♀, collected by beating the vegetation; 3.6.2020, S of Zlati Voyvoda vill., tree and bush vegetation along dry stream among agricultural lands and meadows, brunches of *Crataegus* sp., N42 34 56.1 E26 11 55.5, 222 m a.s.l., 1♀, collected by beating the vegetation; 4.6.2020, E of Kriva Krusha vill., mixed broad leaf forest, N42 33 37.9 E25 55 11.1, 404 m a.s.l., 1♀, collected from water in a paddle on a dirt road.

***Valenzuela piceus* (Kolbe, 1882)**

Material examined: 15.10.2016, W of Kolena vill., *Pinus nigra* plantation, brunches of *Pinus nigra*, N42 28 58.5 E25 42 20.2, 263 m a.s.l., 1♂, 1♀, collected by beating the vegetation; 11.3.2018, S slope of Medven Hill, meadow among bushes, from dry grass, N42 27 03.4 E25 43 48.2, 221 m a.s.l., 1♀, collected by sweep netting; 9.5.2018, Hrishteni village, yard of a house, from *Clemathis vitalba*, N42 27 12.7 E25 42 18.9, 231 m a.s.l., 1♂, collected by beating the vegetation; 22.3.2020, S of Kolena vill., east periphery of Medven Hill, dry grass between mixed forest and agricultural lands, N42 27 25.58 E25 44 12.84, 196 m a.s.l., 1♀, found accidently on white sheet during collecting Ixodidae.

Stenopsocidae

***Graphopsocus cruciatus* (Linnaeus, 1768)**

Material examined: 5.10.2016, near Dabrava vill., grass and bushes, brunches of *Quercus* sp., N42 27 29.8 E25 35 32.9, 545 m a.s.l., 1 ♂, 1 nymph, collected by beating the vegetation; same date and locality, brunch of *Carpinus orientalis*, 1 nymph, collected by beating the vegetation; 13.10.2016, near Malka Vereya vill., grass and bushes, brunches of *Crataegus* sp., N42 24 37.71 E25 33 10.60, 380 m a.s.l., 4 ad., 1 nymph, collected by beating the vegetation; 2.7.2018, W of Yagoda vill., grass and bushes, brunches of *Crataegus* sp., N42 32 20.8 E25 33 34.7, 290 m a.s.l., 1 ♀, collected by beating the vegetation; 5.7.2018, E of Edrevo vill., grass and bushes with single trees, brunches of *Quercus* sp., N42 35 37.1 E25 49 14.2, 303 m a.s.l., 1 ♀, collected by beating the vegetation; 5.7.2018, E of Panicherevo vill., near Zhrebchevo Dam, grass and bushes with single trees, brunches of *Pyrus communis*, N42 35 37.7 E25 51 46.5, 261 m a.s.l., 1 ♀, collected by beating the vegetation; 25.10.2018, W of Lyulyak vill., grass and bushes with single trees, from *Clemathis vitalba*, N42 30 36.4 E25 40 17.0, 414 m a.s.l., 1 ♀, collected by beating the vegetation; 24.10.2018, N of Stara Zagora city, Ayazmoto Park, *Pinus nigra* plantation, from unidentified bushes, N42 26 17.2 E25 36 21.0, 368 m a.s.l., 1 ♂, collected by beating the vegetation; 28.8.2019, near Kavakyika Hut, grass and bushes with single trees, brunch of *Pyrus pyraster*, N42 29 05.5 E25 13 28.4, 943 m a.s.l., 1 ♂, collected by beating the vegetation.

Amphipsocidae

***Kolbia quisquiliarum* Bertkau, 1882**

Reported by Georgiev (2018): "*1 ♂, 23.5.2018, Sarnena Gora Mts., N of Dabrava village, broad leaf xeric forest, dominated by Quercus spp. and Carpinus spp. with a lot of meadows, collected by sweep netting from grass vegetation dominated by Poaceae, N42 27 30.3 E25 35 37.0, 516 m a.s.l.*"

Lachesiliidae

***Lachesilla pedicularia* (Linnaeus, 1758)**

Material examined: 13. and 14.6.2018, Hrishteni village, yard of a house, N42 27 12.7 E25 42 18.9, 230 m a.s.l., 1 ♀, 1 ♂, collected by trapping with plastic containers below lamp during the night; 2.7.2018, W of Yagoda vill., grass and bushes near small stream, from *Humulus lupulus*, N42 32 20.8 E25 33 34.7, 290 m a.s.l., 1♂, collected by beating the vegetation; 24.8.2018, near Zmeevo vill., meadow, from *Dichantium ischaemum*, N42 30 02.7 E25 37 32.8, 490 m a.s.l., 1 ♀, collected by sweep netting, M. Antov leg.; 24.10.2018, W side of the Ayazmoto Park, N of Stara Zagora city, *Pinus nigra* plantation, from various bushes, N42 26 17.2 E25 36 21.0, 368 m a.s.l., 1 ♀, collected by beating the vegetation.

***Lachesilla bernardi* Badonnel, 1938**

Reported by Georgiev (2018): "*1 ♂, 23.5.2018, Sarnena Gora Mts., Hrishteni village, yard of a house, collected by sweeping of Corylus avellana leafs using a small plastic container (small bucket), N42 27 12.7 E25 42 18.9, 230 m a.s.l.; same locality: 1 ♂, 14.6.2018, collected by trapping with plastic containers below lamp during the night; 1 ♂, 29.6.2018, Sarnena Gora Mts., SW part of Hrishteni village, ruderal vegetation, collected by beating the vegetation, from Clemathis vitalba growing on a concrete wall, N42 27 00.0 E25 42 12.1, 222 m a.s.l.*"

Other material examined: 25.8.2018, Starozagorski Bani resort, possibly from grass vegetation, N42 27 27.2 E25 28 36.8, 411 m a.s.l., 1♂, collected by sweep netting, M. Antov leg.; 7.3.2020, E of Kriva Krusha vill., rocky terrain with a lot of *Syringia* sp. bushes, N42 33 38.4 E25 55 30.2, 518 m a.s.l., 1♂, collected from water in small rock wholes (Fig. 1); 4.6.2020, same locality, 1♂.

***Lachesilla quercus* (Kolbe, 1880)**

Material examined: 20.9.2018, N of Lyulyak vill., *Quercus* sp. forest, from *Poaceae* grasses, N42 30 58.3 E25 39 58.5, 449 m a.s.l., 1♀, collected by sweep netting.

Ectopsocidae

***Ectopsocus briggsi* McLachlan, 1899**

Material examined: 2.7.2018, W of Yagoda vill., grass and bushes near small stream, from *Humulus lupulus*, N42 32 20.8 E25 33 34.7, 290 m a.s.l., 2♂, collected by beating the vegetation; 26.4.2020, Hadzhiolova Koria Hill, W of Hrishteni vill., ruderal habitat near a dunghill, from brunches of big *Salix* sp. tree, N42 27 01.1 E25 41 48.8, 262 m a.s.l., 1♂, collected by sweep netting.

***Ectopsocus meridionalis* Ribaga, 1904**

Material examined: 5.7.2018, E of Panicherevo vill., near Zhrebchevo Dam, grass and bushes with single trees, brunches of *Pyrus communis*, N42 35 37.7 E25 51 46.5, 261 m a.s.l., 1♀, collected by beating the vegetation; 19.9.2018, near Borilovo vill., grass and bushes, from mixture of bushes (*Crataegus* sp., *Clemathis vitalba*, *Prunus cerasifera*), N42 28 46.8 E25 33 56.2, 429 m a.s.l., 1♀, collected by beating the vegetation; W of Lyulyak vill., bushes and trees, from *Clemathis vitalba*, N42 30 36.4 E25 40 17.0, 414 m a.s.l., 1♀, collected by beating the vegetation; 7.3.2020, E of Kriva Krusha vill., rocky terrain with a lot of *Syringia* sp. bushes, N42 33 38.4 E25 55 30.2, 518 m a.s.l., 1♀, collected from water in small rock wholes (Fig. 1); 28.4.2020, S of Hrishteni vill., bushes along an irrigation canal, from *Crataegus* sp., N42 26 46.8 E25 42 11.8, 198 m a.s.l., 1♀, collected by beating the vegetation.

***Ectopsocus petersi* Smithers, 1978**

Material examined: 9.1.2020, Hrishteni village, yard of a house, on *Euonymus japonica* bush, N42 27 12.56 E25 42 17.89, 231 a.s.l., 1 ♀ (Fig. 3), collected by beating the vegetation (and 1 ♀ cf *petersi* observed flying near same location on 4.1.2020); 7.3.2020, E of Kriva Krusha vill., rocky terrain with a lot of *Syringia* sp. bushes, N42 33 38.4 E25 55 30.2, 518 m a.s.l., 1♀, 2♂, collected from water in small rock wholes (Fig. 1); 28.4.2020, S of Hrishteni vill., bushes along an irrigation canal, from *Crataegus* sp., N42 26 46.8 E25 42 11.8, 198 m a.s.l., 1♀, collected by beating the vegetation.

Remark: New record for Bulgaria and interesting finding during winter (night temperatures in January 2020 dropped to about -5° C).

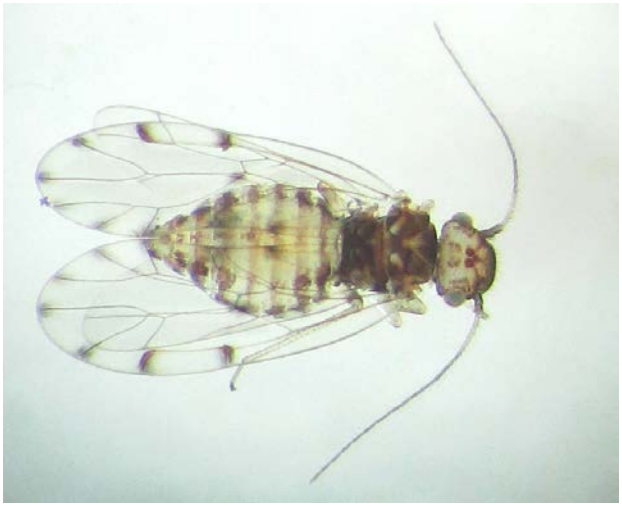

Fig. 3. *Ectopsocus petersi*, ♀, Hrishteni village, yard of a house, collected from *Euonymus japonica* bush. New record for Bulgaria.

***Ectopsocus vachoni* Badonnel, 1945**

Reported by Georgiev (2017a): "*24.9.2016, East of Hrishteni village, edge of a corn field, grass detritus beneath Rosa sp., N42 27 38.3 E25 43 07.9, 234 m a.s.l., 1 ♀; 13.10.2016, North of Malka Vereya village, mixed broad leaf forest, in mixed leaf detritus of Acer tataricum, Prunus spinosa, Tilia sp., Acer campestre, Quercus sp., N42 24 50.87 E25 32 54.08, 380 m a.s.l., 2 nymphs.*"

Elipsocidae

***Cuneopalpus cyanops* (Rostock, 1876)**

Reported by Georgiev (2017a): "*West of Kolena village, Pinus nigra plantation, branches of Pinus nigra, 42°28'58.5"N 25°42'20.2"E, 263 a.s.l., 15.x.2016, 3♂♂, 1♀.*"

Other material examined: 5.7.2018, E of Panicherevo vill., near Zhrebchevo Dam, grass and bushes with single trees, near *Pinus nigra* plantation, brunches of *Pyrus communis*, N42 35 37.7 E25 51 46.5, 261 m a.s.l., 1♀, collected by beating the vegetation; 19.9.2018, near Borilovo vill., grass and bushes, from mixture of bushes (*Crataegus* sp., *Clemathis vitalba*, *Prunus cerasifera*), N42 28 46.8 E25 33 56.2, 429 m a.s.l., 1♂, 2♀, collected by beating the vegetation; 24.10.2018, W side of the Ayazmoto Park, N of Stara Zagora city, *Pinus nigra* plantation, from various bushes, N42 26 17.2 E25 36 21.0, 368 m a.s.l., 1♂, 1♀, collected by beating the vegetation.

***Elipsocus abdominalis* Reuter, 1904**

Reported by Georgiev (2018): "*1 ♂, 18.10.2017, Sarnena Gora Mts., Hrishteni village, yard of a house, found dead below window, N42 27 12.7 E25 42 18.9, 230 m a.s.l.*"

***Elipsocus annulatus* Roesler, 1954**

Reported by Georgiev (2018): "*1 ♂, 28.5.2018, Sarnena Gora Mts., close to Beter Peak, broad leaf xeric forest, dominated by Quercus spp., Carpinus spp., and Acer spp., collected by sweep netting, from grass vegetation dominated by Paeonia sp., N42 30 41.2 E25 37 46.4, 809 m a.s.l.*"

***Elipsocus moebiusi* Tetens, 1891**

Material examined: 20.6.2018, Hrishteni vill., yard of a house, N42 27 12.7 E25 42 18.9, 231 m a.s.l., 1♂, collected by trapping with plastic containers below lamp during the night; 25.10.2018, W of Lyulyak vill., bushes and trees, from *Clemathis vitalba*, N42 30 36.4 E25 40 17.0, 414 m a.s.l., 1♀, collected by beating the vegetation; 3.6.2020, S of Zlati Voyvoda vill., tree and bush vegetation along dry stream among agricultural lands and meadows, brunches of *Salix* sp., N42 34 56.1 E26 11 55.5, 222 m a.s.l., 1♀, collected by beating the vegetation; 4.6.2020, E of Kriva Krusha vill., rocky terrain with a lot of *Syringia* sp. bushes, N42 33 38.4 E25 55 30.2, 518 m a.s.l., 7 ♀, 11♂, collected from water in small rock wholes (Fig. 1).

***Elipsocus pumilis* (Hagen, 1861)**

Material examined: 13.10.2016, North of Malka Vereya village, bush and grass terrain, branches of *Crataegus* sp., N42 24 37.71 E25 33 10.60, 380 m a.s.l., 1♂, 1♀, collected by beating the vegetation.

***Hemineura dispar* Tetens, 1891 – species complex**

Material examined: 9.12.2018, N of Kolena vill., near Kumurdzha River, mixed broad leaf forest, from window of a car, N42 29 11.35 E25 43 20.18, 270 m a.s.l., 1♂, collected by hand; 12.11.2018, Hrishteni village, yard of a house, on a net of a window, N42 27 12.7 E25 42 18.9, 230 m a.s.l., 1♂, collected by hand; 19.11.2018, same locality, 1♂, collected by trapping with plastic containers below lamp during the night.

Remark: females are needed to identify the species from the "*dispar*" complex.

Mesopsocidae

***Mesopsocus immunis* (Stephens, 1836)**

Reported by Georgiev (2017a): "*North of Malka Vereya village, bush and grass terrain, branches of Crataegus sp., 42°24'37.71"N 25°33'10.60"E, 380 a.s.l., 13.x.2016, 1* ♀."

***Mesopsocus unipunctatus* (Müller, 1764)**

Material examined: 11.6.2018, N of Bogomilovo vill., *Quercus* sp., *Carpinus betulus* and *Tilia* sp. forest, grass vegetation, N42 24 49.8 E25 32 49.4, 389 m a.s.l., 1♂, collected by sweep netting.

Peripsocidae

***Peripsocus alboguttatus* (Dalman, 1823)**

Material examined: 19.9.2018, near Borilovo vill., grass and bushes, from mixture of bushes (*Crataegus* sp., *Clemathis vitalba*, *Prunus cerasifera*), N42 28 46.8 E25 33 56.2, 429 m a.s.l., 1♂, 1♀, collected by beating the vegetation; 23.10.2018, S of Ostra Mogila vill., forest near Sazlyika River, from *Urtica* sp., N42 27 10.1 E25 28 27.5, 604 m a.s.l., 1♀, collected by beating the vegetation

***Peripsocus phaeopterus* (Stephens, 1836)**

Material examined: 2.7.2018, W of Yagoda vill., grass and bushes near small stream, from *Humulus lupulus*, N42 32 20.8 E25 33 34.7, 290 m a.s.l., 1♂, collected by beating the vegetation.

Psocidae

***Amphigerontia contaminata* (Stephens, 1836)**

Material examined: 4.6.2020, E of Kriva Krusha vill., rocky terrain with a lot of *Syringia* sp. bushes, N42 33 38.4 E25 55 30.2, 518 m a.s.l., 1♂, collected from water in small rock wholes (Fig. 1).

***Blaste conspurcata* (Rambur, 1842)**

Material examined: 25.8.2018, Starozagorski Bani resort, possibly from grass vegetation, N42 27 28.8 E25 29 32.5, 411 m a.s.l., 1♀, collected by sweep netting, M. Antov leg.

***Metylophorus nebulosus* (Stephens, 1836)**

Material examined: 1.9.2018, N of Lyulyak vill., abandoned quarry, on *Poaceae* grass, N42 31 24.2 E25 40 35.6, 564 m a.s.l., 1♂, collected by sweep netting.

***Neopsocus rhenanus* Kolbe, 1882**

Material examined: 25.11.2018, Hrishteni village, yard of a house, N42 27 12.7 E25 42 18.9, 230 m a.s.l., 1 ♀, 1 nymph, collected by trapping with plastic containers below lamp during the night; 31.1.2019, same locality and method, 1 ♀.

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References

Georgiev, D. (2016) First record of *Lepinotus reticulatus* Enderlein, 1904 (Psocoptera: Trogiidae) from Bulgaria. *Ecologica Montenegrina*, 9: 54-55.

Georgiev, D. (2017a) New Barkfly records from Bulgaria (Insecta: Psocoptera). *Klapalekiana*, 53: 7-9.

Georgiev, D. (2017b) Little known and newly recorded species of Psocoptera in Bulgaria. *Ecologica Montenegrina*, 11: 74-79.

Georgiev, D. (2018) Four species of Psocoptera as new records for Bulgaria. *ZooNotes*, 130: 1-2.

Lienhard, C. (1998) *Psocoptères Euro-Méditerranéens*. Faune de France 83. Fédération Francaise des Sociétés de Sciences Naturelles, Paris, France, 517 pp.

Lienhard, C. & Smithers, C. (2002) *Psocoptera (Insecta): world catalogue and bibliography*. Instrumenta Biodiversitatis V. Muséum d'histoire naturelle, Genève, Switzerland, 745 pp.

Saville, B. (2008) *National Barkfly Recording Scheme (Britain and Ireland)*. Available at: https://www.brc.ac.uk. (Accessed on 05 June 2020).