

On the species diversity of Psocodea (Insecta) of Mount Ismaros, North Greece

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Abstract. This study presents the first data on the species diversity of barklice (Psocodea: Insecta) from Mount Ismaros in northern Greece. Fieldwork conducted between July 2020 and May 2025 resulted in the identification of 21 species from 12 families. Information on the copulation of *Ectopsocus vachoni* was also recorded, including season, time of day, and air temperature.

Key words: insects, distribution, Mediterranean.

Introduction

The barklice (Insecta: Psocoptera) of Greece have been studied primarily in the southern and central regions of the country, encompassing both the mainland and the islands (Lienhard 1998, Lienhard & Smithers 2002, Lienhard 2006, Hollier *et al.* 2011, Sziráki 2013, Georgiev 2020). There is a lack of information on the species diversity of this insect group from many parts of northern Greece, including Mount Ismaros. In this paper, I present the first data on psocid diversity in this area.

Materials and Methods

The field study was conducted between 30 July 2020 and 25 May 2025 (Table 1). Barklice were collected using the following methods: (1) sieving detritus or crushed tree bark with a 1 mm mesh sieve over a white plastic container; (2) beating vegetation over a white plastic container; and (3) hand collecting with a brush. Specimens were preserved in 96% ethanol. Species identifications were based on Lienhard (1998) and Saville (2008).

Results and Discussion

A total of 21 species of Psocodea were recorded during the survey:

Trogiidae

Cerobasis questfalica (Kolbe, 1880)

Material examined: loc. 1, 1 ♀, branches of *Juniperus* sp., beating the vegetation; loc. 6, 1 ♀, branches of *Quercus coccifera*, beating the vegetation; loc. 8, 1 ♀, branches of *Q. coccifera*, beating the vegetation; loc. 10, 1 ♀, dry branches with leaves of *Carpinus orientalis*, beating the vegetation; loc. 11, 1 ♀, branches of *Paliurus spina-christii*, beating the vegetation.

Table 1. Localities of Mount Ismaros where samples were taken (altitude in m a.s.l.).

No	Date	Locality	Coordinates	Alt.
1	30.7.2020	N of Platanitis, maquis	N40 54 01.3 E25 30 27.7	107
2	30.7.2020	E of Platanitis, balcony of a hotel, below window	N40 53 11.7 E25 29 25.0	25
3	10.5.2023	Near Rock of Petrota, semi-open <i>Pinus</i> sp. forest with bushes	N40 54 58.0 E25 36 57.9	75
4	10.5.2023	N of Rock of Petrota, maquis	N40 56 46.3 E25 36 23.3	78
5	16.6.2023	E of Platanitis, balcony of a hotel, below window	N40 53 11.6 E25 29 24.2	21
6	18.6.2023	N of Maronia, <i>Cupressus</i> sp. and <i>Pinus halepensis</i> forest edge	N40 56 01.6 E25 30 59.6	138
7	26.5.2024	E of Platanitis, balcony of a hotel, below window	N40 53 11.7 E25 29 25.0	25
8	27.5.2024	E of Platanitis, bushes near agricultural lands	N40 53 14.8 E25 29 30.1	21
9	28.5.2024	near Platanitis River, <i>Platanus orientalis</i> forest	N40 53 28.1 E25 28 46.2	0
10	28.5.2024	N of Maronia, <i>Pinus halepensis</i> and <i>Quercus</i> sp. forest	N40 56 55.4 E25 31 51.4	202
11	25.5.2025	E of Platanitis, maquis	N40 53 16.8 E25 29 33.7	21
12	25.5.2025	E of Platanitis, various bushes near paved road	N40 53 17.6 E25 29 42.1	29

Trogium pulsatorium (Linnaeus, 1758)

Material examined: loc. 9, 2 ♀, dry leaves of *Rumex crispus*, 3 ♀, from *Hedera helix*, beating the vegetation.

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

Material examined: loc. 1, 1 ♀, bark of dry tree trunk, sieving.

Liposcelis pearmani Lienhard, 1990

Material examined: loc. 1, 1 ♂, branches of *Juniperus* sp., beating the vegetation.

Liposcelis silvarum (Kolbe, 1888)

Material examined: loc. 10, 1 ♀, dry branches with leaves of *C. orientalis*, beating the vegetation.

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

Material examined: loc. 3, 1 ♂, branches of *Juniperus* sp., beating the vegetation.

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

Material examined: loc., 1 ♀, branches of *Quercus ilex*, beating the vegetation; loc. 7, 1 ♂, observed; loc. 8, branches of *Olea europaea*, 1 ♀, beating the vegetation.

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

Material examined: loc. 8, 1 ♀, 2 ♂, dry branches with leaves of *O. europaea*, beating the vegetation.

Lachesilla bernardi Badonnel, 1938

Material examined: loc. 8, 1 ♂, dry branches with leaves of *O. europaea*, beating the vegetation; loc. 9, 1 ♀, 1 ♂, dry leaves of *Rumex crispus*, collected by beating the vegetation.

Ectopsocidae***Ectopsocus meridionalis*** Ribaga, 1904

Material examined: loc. 2, 1 ♀, collected by brush.

Ectopsocus petersi Smithers, 1978

Material examined: loc. 4, 9 ♀, 5 ♂, branches of *Q. coccifera* and *P. spina-christii*, beating the vegetation; loc. 5, 1 ♀, collected by brush; loc. 6, 3 ♀, branches of *Q. ilex*, beating the vegetation; loc. 8, 2 ♀, branches of *Q. coccifera*, 2 ♀, 1 ♂, branches of *Pistacia* sp., 3 ♀, 2 ♂, dry branches with leaves of *O. europaea*, beating the vegetation; loc. 9, 2 ♀, branches of *Platanus orientalis*, 3 ♀, branches of *P. spina-christii*, 1 ♀, branches of *Prunus spinosa*, 3 ♀, from *Hedera helix*, beating the vegetation; loc. 10, 1 ♀, branches of *Quercus* sp., beating the vegetation; loc. 11, 1 ♀, 1 ♂, branches of *P. spina-christii*, beating the vegetation.

Ectopsocus vachoni Badonnel, 1945

Material examined: loc. 2, 1 dry specimen without abdomen, collected by brush; loc. 8, 2 ♀, branches of *Cupressus* sp., beating the vegetation; loc. 12, 1 ♂, 1 ♀ (copulating, 6:30h, air temperature 15°C), detritus and dry leaves.

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

Material examined: loc. 4, 1 ♀, branches of *Q. coccifera* and *P. spina-christii*, beating the vegetation.

Peripsocus phaeopterus (Stephens, 1836)

Material examined: loc. 10, 1 ♀, dry branches with leaves of *C. orientalis*, beating the vegetation.

Trichopsocidae***Trichopsocus dalii*** (McLachlan, 1867)

Material examined: loc. 6, 2 ♀, branches of *Q. ilex*, beating the vegetation; loc. 8, 2 ♂, branches of *Q. coccifera*; loc. 9, 1 ♀, various bushes and trees; loc. 10, 1 ♀, branches of *Q. ilex*, beating the vegetation.

Pseudocaeciliidae***Trimerocaecilius becheti*** Meinander, 1978

Material examined: loc. 5, 1 ♀, collected by hand.

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

Material examined: loc. 3, 1 ♀, 1 ♂, branches of *Juniperus* sp., beating the vegetation.

Elipsocus hyalinus (Stephens, 1836)

Material examined: loc. 4, 1 ♀, branches of *Q. coccifera* and *P. spina-christii*, beating the vegetation; loc. 11, 2 ♀, branches of *P. spina-christii*, beating the vegetation.

Mesopsocidae

Mesopsocus unipunctatus (Müller, 1764)

Material examined: loc. 4, 1 ♂, branches of *Q. coccifera* and *P. spina-christii*, beating the vegetation.

Psocidae

Loensia pearmani Kimmins, 1941

Material examined: loc. 10, 1 ♀, branches of *Quercus* sp. with lichen, beating the vegetation.

Loensia variegata (Latreille, 1799)

Material examined: loc. 6, 1 ♀, branches of *Q. coccifera*, beating the vegetation.

References

- Georgiev, D. (2020) Psocoptera records from north mainland of Greece: a case study. *Parnassiana Archives*, 8: 51-54.
- Hollier, J., Lienhard, C. & Ramel, G. (2011) The Psocoptera of the wetland Kerkini Nature Reserve, with eight species new for Greece. *Entomologist's Monthly Magazine*, 147: 89-91.
- Lienhard, C. (1998) *Psocoptères euro-méditerranéés*. Faune de France: Volume 83, Paris, 517 p.
- Lienhard, C. & Smithers, C. N. (2002) *Psocoptera (Insecta)*. *World Catalogue and Bibliography*. Muséum d'histoire naturelle, Genève, 745 p.
- Lienhard, C. (2006) Four interesting psocids (Psocodea: 'Psocoptera') from European parts of Russia and from the eastern Mediterranean. *Revue Suisse De Zoologie*, 113(4): 807-815.
- Saville, B. (2008). National Barkfly Recording Scheme (Britain and Ireland). Available from: <https://www.brc.ac.uk> [accessed 27 May 2025].
- Sziráki, G. (2013) Data to the Psocoptera fauna of Balkan Peninsula and two Aegean islands. *Folia Historico-naturalia Musei Matraensis*, 37: 65-70.