PSOCOPTERA RECORDS FROM ELAFONISOS ISLAND, SOUTH PELOPONNESUS, GREECE

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Abstract

The field work for this study was carried out between 20.8.2018 and 25.8.2018. Our survey on the Psocoptera fauna of the Elafonisos Island revealed nine Psocoptera species from six genera. All species were new records for the area of the island.

Keywords: Elafonisos Island, Peloponnesus, Greece, Insecta, fauna.

Introduction

Elafonisos (Ελαφόνησος) is a small island between the Peloponnesus and Kythira. It lies off the coast of Cape Malea and Vatika. The area of the island is 19 square kilometres, it is eroded and dry, lacking any freshwater sources. The human population on the island and the tourism are constantly growing and threat its nature, though it is part of the Natura 2000 (ELSTAT 2009-2010).

The barklice (Insecta: Psocoptera) of Greece were mostly studied in its southern and central regions, including the area of Peloponnesus. However, information on the psocid fauna of the islet of Elafonisos is lacking (Lienhard, 1998). In this paper we provide the first information on this animal group for this area.

Material and Methods

The study was carried out during a short vacation, between 20.8.2018 and 25.8.2018 on Elafonisos Island (Tab. 1, Fig. 1, 2). The barklice were collected by following methods: 1. Sieving with 1 mm mesh width sieve of detritus or crushed tree bark particles above white plastic container; 2. Beating the vegetation above white plastic container; 3. Sweep netting of vegetation; 4. Actively searched and collected by brush. Specimens were then stored in ethanol and after processing, deposited in the collection of the first author. After identification they were preserved in a mixture of ethanol, acetic acid and glycerin. Species identification and taxonomical order follow Lienhard (1998) and Lienhard & Smithers (2002). As a supporting source, Saville (2008) was also used.
### Table 1. Localities on Elafonisos where samples were taken, arranged chronologically according the survey (altitude in m a.s.l.)

<table>
<thead>
<tr>
<th>No</th>
<th>Date</th>
<th>Locality</th>
<th>Coordinates</th>
<th>Alt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>20.08.2018</td>
<td><em>Juniperus</em> sp. bushes and trees, near the port.</td>
<td>N 36°30′14.8″ E 22°58′15.9″</td>
<td>15</td>
</tr>
<tr>
<td>2.</td>
<td>20.08.2018</td>
<td>Near Acrotiri Beach bar, phrygana with single <em>Pistacia</em> sp. and <em>Olea europaea</em>.</td>
<td>N 36°29′50.6″ E 22°58′57.3″</td>
<td>10</td>
</tr>
<tr>
<td>3.</td>
<td>20.08.2018</td>
<td>Sand dunes with <em>Juniperus</em> sp. at Simos Beach.</td>
<td>N 36°28′18.0″ E 22°58′44.5″</td>
<td>0</td>
</tr>
<tr>
<td>4.</td>
<td>20.08.2018</td>
<td>Sand dunes with <em>Juniperus</em> sp. near Kato Nisi village.</td>
<td>N 36°29′09.8″ E 22°56′00.6″</td>
<td>0</td>
</tr>
<tr>
<td>5.</td>
<td>20.08.2018</td>
<td>Small cave near Kato Nisi village.</td>
<td>N 36°29′08.9″ E 22°56′09.4″</td>
<td>16</td>
</tr>
<tr>
<td>6.</td>
<td>21, 23.08.2018</td>
<td>Mixed forest with meadows on sand dunes near Elafonisos village (Eucaliptus sp., <em>Juniperus</em> sp., <em>Pistacia</em> sp., <em>Olea europaea</em>, <em>Agave americana</em>, <em>Opuntia ficus-indica</em>, <em>Arundo donax</em>, Poaceae).</td>
<td>N 36°30′31.4″ E 22°58′27.3″</td>
<td>0</td>
</tr>
<tr>
<td>7.</td>
<td>22.08.2018</td>
<td><em>Olea europaea</em> plantation above Elafonisos village.</td>
<td>N 36°30′05.5″ E 22°58′42.8″</td>
<td>63</td>
</tr>
<tr>
<td>8.</td>
<td>22.08.2018</td>
<td>Small rock niche below Simos Cave.</td>
<td>N 36°28′42.3″ E 22°58′07.1″</td>
<td>35</td>
</tr>
<tr>
<td>9.</td>
<td>23.08.2018</td>
<td>Bushes with single <em>Olea europaea</em> and <em>Quercus coccifera</em> trees below Simos Cave.</td>
<td>N 36°28′41.1″ E 22°58′06.8″</td>
<td>34</td>
</tr>
<tr>
<td>10.</td>
<td>23.08.2018</td>
<td>Bushes near <em>Olea europaea</em> plantation below the highest point of the island.</td>
<td>N 36°29′17.7″ E 22°58′22.7″</td>
<td>152</td>
</tr>
</tbody>
</table>

**Fig. 1.** Location map of the investigated area and position of the localities surveyed on Elafonisos Island (locality numbers correspond with those in Material and Methods).
Results

A total of nine species from six families were identified, as follows:

**Trogiidae**

*Cerobasis guestfalica* (Kolbe, 1880)

Material examined: locality nr. 1, 2 nymphs, collected by beating the vegetation, from *Pistacia* sp., and 9n, from *Juniperus* sp.; locality nr. 3, 1♀, 5n, collected by beating the vegetation, from *Juniperus* sp.; locality nr. 4, 1n, collected by beating the vegetation, from *Juniperus* sp.; locality nr. 6, 1♀, collected by sieving leaf detritus (23.8.2018); locality nr. 10, 1n, collected by beating the vegetation, from *Quercus coccifera*.

Remark: We found this species also on the mainland, close to the island: 1♀, 1n, sand dunes near Strogili Lake, collected by sweep netting, from various bushes, N 36° 31’ 4.0” E 22° 59’ 12.4”, 24.8.2018.

**Psyllipsocidae**

*Psyllipsocus ramburii* Selys-Longchamps, 1872

Material examined: locality nr. 5, 1♀ (micropterous), 1nymph, collected by brush, under stones in the cave.
Psocoptera of Elafonisos

**Liposcelididae**

*Liposcelis bostrychophila* Badonnel, 1931

Material examined: locality nr. 7, 1♀, collected by sieving leaf detritus below *Olea europaea*; locality nr. 8, 1♂, 1 nymph, collected by sieving dry goat excrements.

*Liposcelis decolor* (Pearman, 1925)

Material examined: locality nr. 6, 1♀, collected by sieving dry stem of *Opuntia ficus-indica* (23.8.2018); locality nr. 9, 1♀, collected by sweep netting, from dry grass.

*Liposcelis pearmani* Lienhard, 1990

Material examined: locality nr. 6, 1♀, collected by sieving dry stem of *Opuntia ficus-indica* and 2♀, collected by sieving leaf detritus (23.8.2018); locality nr. 7, 1♀, collected by sieving leaf detritus below *Olea europaea*.

**Caeciliusidae**

*Valenzuela burmeisteri* (Brauer, 1876)

Material examined: locality nr. 6, 1♂, collected by sweep netting, from *Poaceae* grass.

*Stenocaecilius caboverdensis* (Meinander, 1966)

Material examined: locality nr. 6, 2♂, collected by sweep netting, from *Poaceae* grass.

**Trichopsocidae**

*Trichopsocus dalii* (McLachlan, 1867)

Material examined: locality nr. 2, 1♂, collected by beating the vegetation, from *Olea europaea*; locality nr. 7, 1♀, collected by beating the vegetation, from *Olea europaea*; locality nr. 9, 1♀, collected by sweep netting, from *Pistacia* sp.; locality nr. 10, 1♂, collected by beating the vegetation, from *Pistacia* sp.

**Psocidae**

*Amphigerontia contaminata* (Stephens, 1836)

Material examined: locality nr. 9, 1♀, collected by sweep netting, from *Olea europaea* and 1♂, collected by sweep netting, from dry grass.

**Discussion**

This case study showed relatively poor Psocoptera fauna on the islet. However, in future studies some more species may be added to the current list. For example, we registered on mainland, very close to the island, the species *Trogium pulsatorium* (Linnaeus, 1758) (1♀, sand dunes near Strogili Lake, collected by sweep netting, from various bushes, N 36° 31ʹ 4.0ʺ E 22° 59ʹ 12.4ʺ, 24.8.2018.), and its finding on Elafonisos is quite possible. Also many widely distributed species as *Lepinotus reticulatus* Enderlein, 1905, *Valenzuela flavidus* (Stephens, 1836), *Lachesilla* spp., *Ectopsocus* spp. and others could be expected there, especially in a less dry season as spring and winter.
Acknowledgements

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Literature


