Additional records of Iberian parasitic insect fungi: Laboulbeniales (Ascomycotina) and Aegeritella (Deuteromycotina)

Xavier Espadaler¹ and David Suñer²

¹ Departament de Biologia Animal, de Biologia Vegetal i d'Ecològia. Universitat Autònoma de Barcelona. 08193 Bellaterra (Barcelona).
² Departament de Biologia Animal, de Biologia Vegetal i d'Ecològia. Col·legi Universitari de Girona (UAB). 17071 Girona.

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Abstract. The genus Herpomyces Thaxter, with H. periplanetae Thaxter and H. ectobiae Thaxter, is added to the Iberian Laboulbeniales. The ant Myrmica specioides Bondr. is a new host for Rickia wasmannii Cavara. The ants Lasius umbratus (Nyl.) and Lasius distinguendus Emery are new hosts for Deuteromycotina Aegeritella tuberculata Bal. et Wis.

Resumen. Citas adicionales de hongos parasitos ibéricos: Laboulbeniales (Ascomycotina) y Aegeritella (Deuteromycotina). Añadimos el género Herpomyces Thaxter, con las especies H. periplanetae Thaxter y H. ectobiae Thaxter al catálogo de Laboulbeniales ibéricas. Otros datos, referentes a Rickia wasmannii Cavara, incluyen un huésped inédito, Myrmica specioides Bondr. Las hormigas Lasius umbratus (Nyl.) y Lasius distinguendus Emery han sido encontradas parasitadas por Aegeritella tuberculata Bal. et Wis. (Deuteromycotina).

Introduction

A short visit to the University of Alicante provided the opportunity to examine some preserved insects, in search of Laboulbeniales. Just one cockroach could be inspected and we were lucky enough to find it parasitized with a Laboulbenial. This, in tum, lead to further searching on any available cockroach, and the finding of another species, also unknown for the Iberian peninsula. Some more records of Laboulbeniales from the last three years are added to this note. We report also two findings of Aegeritella, a poorly known genus of epizoic Deuteromycotina on ants.

Ascomycotina

Herpomyces periplanetae Thaxter, 1902 (Fig. 1a,b).

On *Periplaneta americana* (L.) (Blattaria: Blattidae) from Alicante (Alicante), 20-1-1985, E. Seva leg.; on *Blatta orientalis* (L.) (Blattaria: Blattidae) from Sarriá (Barcelona), 29-VI-1977. The genus is not listed in the previous works concerning Iberian Laboulbeniales (Balazuc et al. 1982, 1983, Santamaria 1985); it occurs only on *Blattaria*, and the distribution of *H. periplanetae* follows the one of its host, that is cosmopolitan (Thaxter 1908).

Herpomyces ectobiae Thaxter 1902 (Fig. 1c).

On *Blattella germanica* (L.) (Blattaria: Blattellidae), from Girona province, without locality; M.D. Llenas leg. Same comments as above.

O. Laboulbeniales. SubO. Laboulbeniineae. Fam. Laboulbeniaceae

Rickia wasmannii Cavara, 1899 (Fig. 1d).

On *Myrmica sabuleti* Meinert (Hymenoptera: Formicidae) from Organya (Lleida), 2-X-1983, Espadaler leg; from Sta. Maria de Finestres (Girona), 17-X-1985. Suñer leg; on *Myrmica specioides* Bondr. from Quart (Girona), 7-VIII-1986, Suñer leg. This last species is a new host to the fungus.

Deuteromycotina

Aegeritella tuberculata Bal. et Wis. 1982.

On *Lasius umbratus* (Nyl.) (Hymenoptera: Formicidae) from Sant Julià del Corb (Girona), 13-VIII-1986, Suñer leg. and *Lasius distinguendus* Emery from Sta. Fe, Montseny (Barcelona), 2-VI-1986, Camps leg. Both ant species are new hosts to the fungus.

*Aegeritella* fungi have been recently found in the Iberian peninsula. The data now reported represent new hosts for the fungus, previously known from three localities in Poland (Balazi & Wisniewski, 1982) and one in Spain (Espadaler & Wisniewski, 1987). Thirty-three out of thirty-eight (86 %) ants in the sample of *Lasius umbratus* were found to be infected. This is the higher percentage ever recorded of *Aegeritella* on ants. The distribution of bulbils on the body of workers showed a similar trend as the one reported for *Formica presilabris* (Nyl.) (Espadaler & Wisniewski, 1987): the bulbils are more abundant at the rear of the body (Fig. 2, Table 1); the aspect of the bulbils varies from a yellowish, flat plate, difficult to see since the ants are also yellowish, to a dark, mountain-like structure (Fig. 3); it would be highly interesting to follow the ontogeny of developing bulbils on alive material, to check if this distal distribution is due to the auto and allogrooming of the ants.

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Figure 1. a) *Herpomyces periplanetae* Thaxter, on *Periplaneta americana* (L.). Individuals are usually found in groups, growing from a common foot (F). b) *Herpomyces periplanetae*, closer view; the last perithecial cell (PC) grows typically finger-like; see also the opening of the perithecium (O). c) Three individuals of *Herpomyces ectobius* Thaxter on antennal segment of *Blatella germanica* (L.). d) Individuals of *Rickia wasmannii* Cavara from *Myrmica sabulett* Meinert. All scales in mm.
Figure 2. Cumulative number of bulbils of *A. tuberculata* found on head (1), thorax (2), gaster (3), first leg (4), second leg (5), and third leg (6) in 33 workers of *Lasius umbratus*.

Table 1. Number and distribution of *Aegeritella tuberculata* Bal. et Wis. bulbils among workers (*n* = 33) of *Lasius umbratus* (Nyl.) from Sant Julià del Corb (Girona).

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Range</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head</td>
<td>0.25</td>
<td>(0 - 1)</td>
<td>back of head</td>
</tr>
<tr>
<td>Thorax</td>
<td>1.33</td>
<td>(0 - 5)</td>
<td>pronotum/propodeum</td>
</tr>
<tr>
<td>Gaster</td>
<td>1.66</td>
<td>(0 - 6)</td>
<td>first gaster tergit</td>
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<tr>
<td>1st leg</td>
<td>0.55</td>
<td>(0 - 3)</td>
<td>femur, tibia</td>
</tr>
<tr>
<td>2nd leg</td>
<td>1.02</td>
<td>(0 - 3)</td>
<td>femur, tibia</td>
</tr>
<tr>
<td>3rd leg</td>
<td>1.63</td>
<td>(0 - 5)</td>
<td>femur, tibia</td>
</tr>
<tr>
<td>Total</td>
<td>6.44</td>
<td>(0 - 18)</td>
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Figure 3. Portion of a leg of Lasius umbratus with a bulbil of Aegeritella tuberculata Bal. et Wis., aleuriophores (A), with small aleuriospores extrude from the growing thallus; scale in mm.

References


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