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CONTRIBUTION TO THE STUDY OF SUBORDER MESOSTIGMATA. MITES ECTOPARASITE ON CHIROPTERA IN GALICIA (SPAIN): FAMILIES LAELAPIDAE AND MACRONYSSIDAE

BY A. PEREIRA LORENZO * and P. QUINTEIRO ALONSO *

CHIROPTERA LAELAPIDAE MACRONYSSIDAE SPAIN

SUMMARY: Four species of mites belonging to the families Laelapidae and Macronyssidae are identified from thirteen bat samples of the genera Rhinolophus, Eptesicus and Pipistrellus. Steatonyssus (Steatonyssus) periblepharus and S. (S.) occidentalis are new records for Spain; furthermore, a new host was found for the second species: Eptesicus serotinus.

CHIROPTÈRES LAELAPIDAE MACRONYSSIDAE ESPAGNE

RÉSUMÉ: Les auteurs ont identifié quatre espèces d'acariens appartenant aux familles Laelapidae et Macronyssidae, après l'examen de treize exemplaires de chauve-souris des genres Rhinolophus, Eptesicus et Pipistrellus. Steatonyssus (Steatonyssus) periblepharus et S. (S.) occidentalis sont cités pour la première fois en Espagne, nous signalons pour ce dernier acarien un nouvel hôte: Eptesicus serotinus.

INTRODUCTION

Few studies on Chiroptera's ectoparasites have been carried out in Spain, meaning that the reported citations in our study have been made for the first time in our country (Galicia).

The work accomplished by SANCHEZ ACEDO et al. (1974) in his study of Chiroptera parasitology must be mentioned in that it hardly makes reference to the mesostigmatid mites, citing Laelaps (Echinolaelaps) echidninus on Rhinolophus ferrumequinum, and the work of ESTRADA Peña et al. (1989) in which they relate some mites and ticks parasitic on Chiroptera in North and Northeast of Spain.

We have gathered thirteen bats in different areas of Galicia, as shown in Fig. 1, eighth of which were collected in their resting places during the hibernation state while the remaining five were captured during the active period.

The recovery of parasites was carried out following the method suggested by LIPOVSKY (1951).

The mounting was made in Hoyer's liquid, sometimes adding colouring in order to project a larger contrast of the different structures.

RESULTS AND DISCUSSION

After examining the thirteen bat specimens of the Rhinolophus, Eptesicus and Pipistrellus genera, we
identified the following species: *Laelaps (Echinolaelaps) echidninus* (Laelapidae), *Steatonyssus (Steatonyssus) periblepharus*, *Steatonyssus (Steatonyssus) occidentalis* and *Macronyssus uncinatus* (Macronyssidae).

In Table I, we show the prevalence and mean intensity of parasitism presented by the stated species.

As it can be observed, *R. hipposideros* did not present parasitization for these types of mites. The identified species presented a high specificity and prevalence except for *L. (E.) echidninus*.

**Family Laelapidae**

*Laelaps (Echinolaelaps) echidninus* Berlese, 1887


The finding of one specimen of the *L. (E.) echidninus* on a *R. ferrumequinum* is an infrequent fact, due to the ecological exclusion and to the low specificity of the parasite. Although SÁNCHEZ-ACEDO *et al.* (1974) also once cited it on a
TABLE I: Prevalence and mean intensity of the parasitation presented by the captured host.

<table>
<thead>
<tr>
<th>Species</th>
<th>RFE</th>
<th>RHI</th>
<th>ESE</th>
<th>PPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laelaps (Echino/aelaps) echidinus</td>
<td>(0,43 %)</td>
<td>1</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Macronyssus uncinati</td>
<td>(87,21 %)</td>
<td>5,5</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Steatonyssus (S.) periblepharus</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Steatonyssus (S.) occidentalis</td>
<td>—</td>
<td>—</td>
<td>100 %</td>
<td>10,66</td>
</tr>
</tbody>
</table>

( ) = Prevalence

Rhinolophus, we consider it accidental due to the cosmopolitanism and low specificity presented by this mite.

Family Macronyssidae

Macronyssus uncinati Canestrini, 1885

Covelo (Pontevedra), Ex. Rhinolophus ferrumequinum. 1 ♂, 1 ♀, 2 PN (10-xii-84); 23 PN (28-i-85); 4 PN (26-iv-85); Salvaterra (Pontevedra), Ex. Rhinolophus ferrumequinum. 2 PN (25-v-85).

It has been cited in bats of the families Vespertilionidae and Rhinolophidae, but it prefers the Rhinolophus species (RAĐOVSKY, 1967). We found it from Rhinolophus ferrumequinum. It is the first time that this mite is mentioned in Spain.

Steatonyssus (Steatonyssus) periblepharus
Kolenati, 1858

Val do Dubra (La Coruña), Ex. Pipistrellus pipistrellus 12 PN (16-v-83); 1 ♂, 1 ♀, 14 PN (3-vi-83); Ponteareas (Pontevedra), Ex. Pipistrellus pipistrellus 4 PN (29-viii-85).

It has been cited on Pipistrellus kuhlii in Argelia, on P. pipistrellus and Myotis mystacinus in the British Isles (TILL and EVANS, 1964). DUSBAŽEK (1964) collected it from P. pipistrellus in Bulgaria.

We found an elevated intensity of parasitism in the three Pipistrellus pipistrellus examined. It is the first time that this mite is mentioned in Spain.

Steatonyssus (Steatonyssus) occidentalis
Ewing, 1933

Salvaterra (Pontevedra), Ex. Eptesicus serotinus 5 ♀, 2 ♂, 34 PN (25-viii-85).

It has been cited by MILLER et al. (1973) on Eptesicus fuscus. RAĐOVSKY and FURMAN (1963) gathered it from Myotis velifer and Tadarida brasiiliensis. YUNKER (1958) cited it on Myotis lucifugus. We found it with an elevated intensity of parasitism on the sole specimen of Eptesicus serotinus examined. We make the first citation in Spain and propose this new host for this mite.

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