

## A redescription of *Rhadinopsylla pitymydis* (Zav.) (Siphonaptera)

by

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Recently (1957, *Bull. Brit. Mus. (Nat. Hist.)*, Ent. 6 (2) : 54), when I recalled *Neopsylla* (now *Rhadinopsylla*, subgenus *Actenophthalmus*) *pitymydis* Zavattari, 1914, from synonymy with *R. (A.) isacantha* (Rothschild), 1907, and tentatively restored it to specific status, I noted that the original male and female of the former species, the only known specimens, had apparently been lost. It came therefore as a most pleasant surprise when in November 1957 Dr. F. CAPRA of the Museo Civico di Storia Naturale "G. Doria" in Genoa, informed me that he had found ZAVATTARI's syntypes and most kindly submitted the specimens to me for examination. Both specimens of *R. pitymydis* were preserved in alcohol and I had to clear and mount them before they could be studied in detail. My surmise that *R. pitymydis* would not be identical with *R. isacantha* turns out to be correct, although it is closely related to that species, and also to *R. dolomydis* Smit and perhaps to *R. stroubali* Smit and *R. bureschi* Jordan. Actually, it is at present rather difficult to evaluate the status of a number of species of *Rhadinopsylla* properly because (a) the specific differences are often very small and (b) the material available for study is still very scanty.

ZAVATTARI did not designate a holotype, so his specimens (both of which are labelled "Typus") are syntypes; I hereby select the male as the lectotype of *Neopsylla pitymydis* Zavattari, the female thus automatically becoming the allotype.

*Rhadinopsylla (Actenophthalmus) pitymydis* (Zavattari), 1914 (Figs. 1—5)  
*Neopsylla pitymydis*. ZAVATTARI, 1914, *Ann. Mus. civ. Stor. nat. Genova* 46 : 144, fig.

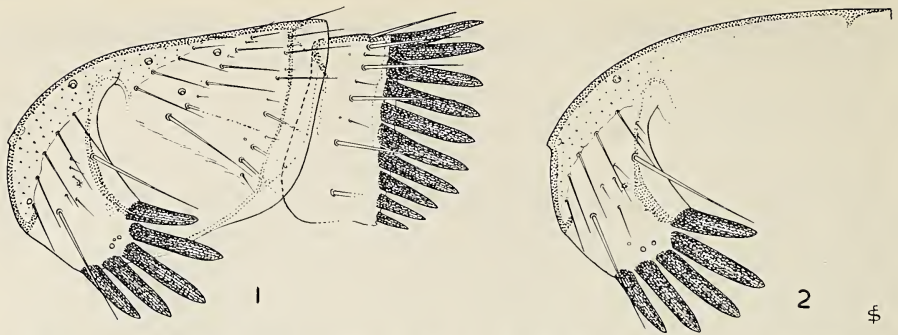
*Neopsylla pitymydis* Zavatt. JORDAN, 1921, *Ectoparasites* 1 : 141 (considered a synonym of *Rhadinopsylla isacanthus*).

*Rhadinopsylla (Actenophthalmus) pitymydis* (Zavattari). SMIT, 1957, *Bull. Brit. Mus. (Nat. Hist.)*, Ent. 6 (2) : 54 (recalled from synonymy with *Rhadinopsylla isacantha*).

Material examined: Male lectotype, Cascinelle (8 KM. N.W. from the centre of Genoa, western Liguria, N.W. Italy, from *Pitymys leponticus* [= *Pitymys subterraneus multiplex*]\*, III.1909, G. DORIA; female allotype, Cascinelle, from *Pitymys savii*, 5.IV.1910, G. DORIA.

Diagnosis: Closely related to *R. (A.) isacantha s. l.* but differing in the male by the pointed apex of the movable process of the clasper and the widened apex of the distal arm of sternum IX, and in the female by the apparent absence of a circular area on the tergal pleurite of segment IX and by the smaller spiracular fossa of tergum VIII. Moreover, the uppermost genal spine is somewhat broader than in *R. isacantha*, especially in the female.

\*) The host of the male was recorded by ZAVATTARI as *Pitymys multiplex*, but is given as *Pitymys leponticus* on the label written by the late Dr. A. DAMPF who examined the specimen prior to 1914 and determined it as "*Neopsylla isacanthus* (Rothsch.)" (not *Neopsylla pentacanthus* Roths., as incorrectly stated by ZAVATTARI).



Figs. 1, 2. *Rbadinopsylla pitymydis* (Zav.). 1. Head and pronotum, ♂ lectotype; 2. Anterior part of head, ♀ allotype.

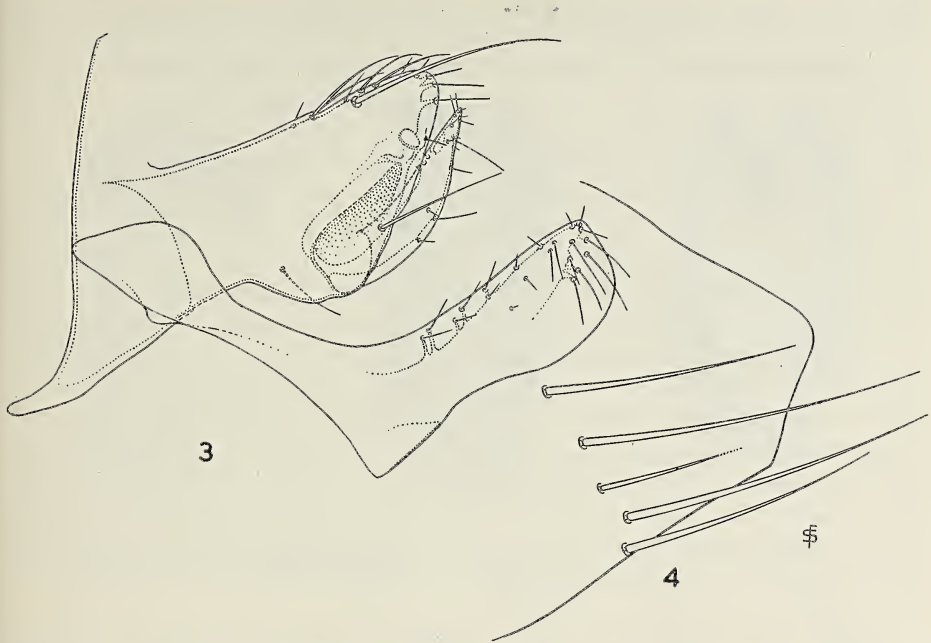
**Redescription:** Head (Figs. 1, 2). Submarginal frontal row with five setae, posterior to this row two large setae, one of which is near the posterior margin of the preantennal area, the other on the gena. Genal ctenidium with five spines, the uppermost being basally distinctly broader than the other four and reaching to about two-thirds the dorsal length of the penultimate spine. The five-segmented labial palp reaches to about three-quarters the length of the fore coxa. Setae of antennal pedicel very short. Postantennal region of head with three rows of setae.

**Thorax:** Pronotum (Fig. 1) with one row of 12 setae on the two sides together; pronotal ctenidium consisting of 20 spines in the male, 21 in the female, the upper spines slightly longer than the dorsal length of the pronotum. Mesonotum with a main row of five setae each side, mesosternosome with six setae; metanotum with a main row of five setae per side, metepisternum with three setae, metasternum with one large seta in the male, one large seta and one small one in the female, and metepimeron with five setae. Suture between collar of metanotum and dorso-anterior part of metepimeron fairly well-developed, more or less as in *R. (A.) isacantha*.

**Legs:** No setae on inner surface of hind femur and tibia. Longest apical seta of segment II of the hind tarsus extending to the apex of segment III or a little beyond. All fifth tarsal segments with four pairs of lateral plantar setae.

**Abdomen:** Numbers of setae per side in the main row of terga I—VII, ♂ ♀: 4, 6, 6, 6, 6, 6, and 5 (4 only on one side of tergum VII in the female). Numbers of spinelets on each side of the posterior margin of terga I—VI, ♂: 3/3, 3/3, 3/3, 2/3, 2/3, 1/1; ♀: 3/3, 3/3, 3/3, 3/3, 2/2, 1/1. The two subequally long antesensilial setae of the female stand on a very distinct pedestal, as in *R. isacantha*, and the margin of the tergum below the pedestal is angular as in the latter species (Fig. 5). Sensilium with 13 trichobothria each side in both sexes. Numbers of setae per side on sterna II—VIII, ♂: 1, 2, 2, 2, or 3, 2 or 3, 2 or 3, 4 or 5; on sterna II—VII, ♀: 1, 3, 3, 3 or 4, 4, 4, 4 or 5.

**Modified abdominal segments and genitalia.** Male (Figs. 3, 4): Tergum VIII without setae. Lobe of posterior margin of sternum VIII (Fig. 4) forming about a right angle. Clasper and sternum IX (Fig. 3) not unlike those of *R. isacantha*. Fixed process of clasper with about ten slender setae along the dorsal and dorso-ventral margin; acetabular seta placed a little



Figs. 3, 4. *Rhadinopsylla pitymydis* (Zav.). 3. Clasper and sternum IX; 4. Sternum VIII. Both figures drawn from the lectotype.

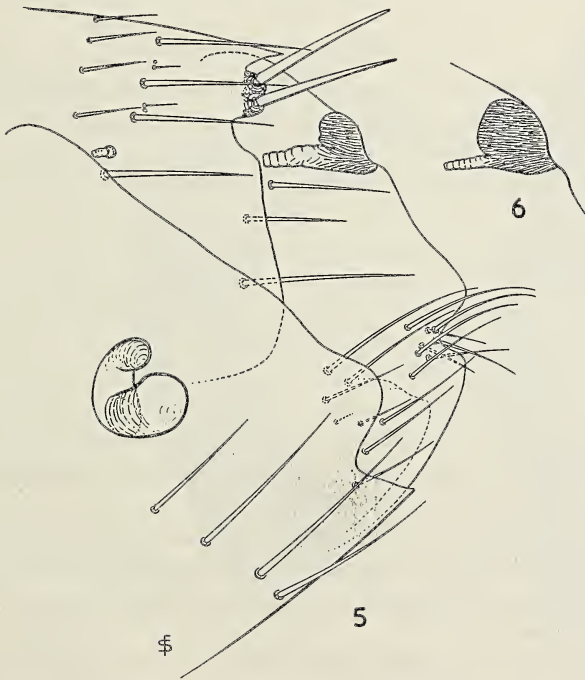


Fig. 5. *Rhadinopsylla pitymydis* (Zav.). Segments VII and VIII, and spermatheca (allotype).  
Fig. 6. *Rhadinopsylla isacaniba isacaniba* (Roths.), Spiracular fossa of tergum VIII, ♀.



above the level of the ventral end of the anterior margin of the movable process. Movable process of clasper markedly narrowing towards the pointed apex, and the circular depression is situated not far from the apex. The subventral seta on the inner side of the corpus of the clasper is much longer than the one in related species. Manubrium of clasper shorter than in *R. isacantha*. Apical half of the distal arm of sternum IX markedly broader than the basal half; the dorsal and the partially straight apical margins of this arm meet at about a right angle; chaetotaxy as shown in Fig. 3. The phallosome is like that of related species. Female (Fig. 5): Posterior margin of sternum VII with a fairly large subventral sinus, above which the margin forms a rounded lobe. Tergum VIII with a row of three setae below the spiracle, and a group of about ten slender setae on its ventral portion. The tubular portion of the spiracular fossa of tergum VIII is broader than that in *R. isacantha*, but the spiculate expansion much smaller than in the latter species (Fig. 5, cf. Fig. 6). There are only four genital setae on the inner side of tergum VIII. Tergal pleurite of segment IX with an extremely faint indication of a small internal spiculate area; for practical purposes this area can be said to be absent. Anal stylet about four times as long as broad in its middle. Anal sternum with numerous setae. The spermatheca is not well placed in the mounted specimen but it appears to resemble that of *R. isacantha*.

Length: ♂  $1\frac{3}{4}$  mm., ♀ 2 mm.

## Ueber die systematische Stellung von *Rhisotrogus bulgaricus* Mink. (Col. Scarab.)

von

S. KANTARDSCHIEVA-MINKOVA

In den *Mitteilungen des Zoologischen Institutes der Bulgarischen Akademie der Wissenschaften*, Bd. II., Sofia, 1953, S. 296, beschrieb und zeichnete ich eine für die Wissenschaft neue Art *Rhisotrogus bulgaricus* Mink., die in Westbulgarien in der Umgebung der Stadt Radomir und den angrenzenden Dörfern anzutreffen ist.

Am Anfang der Diagnose teile ich mit, daß „wegen Mangel an Larven seine Gattungszugehörigkeit mit Sicherheit bis jetzt nicht bestimmt werden kann. Die für die Zukunft gesammelten Erwachsenen und Larvenformen werden eingehend studiert und nachträglich beschrieben werden“.

Während der folgenden 3 Jahre (1954—1956) habe ich viel neues Material von Erwachsenen und Larven gesammelt, desgleichen konnte ich auch die Entwicklung und zum Teil die Biologie dieser neuen interessanten Art verfolgen. Meine neuesten Erforschungen klärten die Gattungs- und Artzugehörigkeit dieses für die Wissenschaft neuen Hartflüglers auf.

Im Jahre 1955 erschien in der Zeitschrift *Entomologische Berichten*, No. 15, S. 514—518, eine Publikation des jugoslawischen Entomologen René MIKŠIĆ, unter dem Titel: „Eine neue Untergattung und Art der Melolonthiden aus der Volksrepublik Macedonien“.

In dieser Publikation beschreibt der Verfasser eine für die Wissenschaft neue Art, die er *Rhisotrogus macedonicus* benennt, indem er dieselbe Art zu einer speziellen Untergattung zählt, die er *Butozania* nennt. Die Beschreibung und die