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A DESCRIPTION OF THE MALE OF POECILOCHIRUS SUBTERRANEUS (MÜLLER) (MESOSTIGMATA : PARASITIDAE)

BY J. E. CHRISTIE*

MALE DESCRIBED

SUMMARY: The male of Poecilochirus subterraneus (Müller) is described and figured. The specimens were collected from mole corpses.

MÄNNCHEN BESCHRIEBEN

ZUSAMMENFASSUNG: Das Männchen von Poecilochirus subterraneus (Müller) wird beschrieben und illustriert. Die Beispiele wurden an toten Maulwürfen gefunden.

INTRODUCTION

Neither the male nor female of Poecilochirus subterraneus (Müller) has previously been described. Deuteronymphs are frequently found on beetles of the genus Nicrophorus (Silphidae). They are widespread in the British Isles in addition to continental Europe (Hyatt, 1980).

During a study of mites associated with British burying beetles (Christie, 1981), deuteronymphs were frequently found on Nicrophorus humator (Gleditsch) and Nicrophorus investigator Zetterstedt, rarely on Nicrophorus vespilloides Herbst and not on Nicrophorus vespillo (Linnaeus).

Very little is known of the development or biology of this species, although Holzmann (1969) figured the larva. Attempts were made to breed this species under varying laboratory conditions but, although deuteronymphs were maintained for considerable periods in the absence of beetles, none moulted to adults.

Davydova (1969 and 1976) recorded P. subterraneus from Western Siberia and keyed and figured the deuteronymph, male and female. Hyatt (1980) considers her figures of the deuteronymph not to be subterraneus of Müller but P. davydova Hyatt (1980).

MATERIALS AND METHODS

Two male P. subterraneus were collected from a mole (Talpa europaea (L.)) corpse which was buried by burying beetles. At the time of collection, the corpse was colonized by two N. humator, a few blowfly larvae, all stadia of Poecilochirus carabi G. & R. Can., female Alliphis necrophilus Christie and Anoetidae.

Preparations of the mites were cleared in 60% lactic acid on a warm plate for a few days and then permanently mounted in de Faure’s medium. The figures were drawn onto graph paper with the

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Fig. 1 A-F. : Poecilochirus subterraneus (Müller), Male.
A) dorsum ; B) venter of gnathosoma ; C) leg II ; D) tectum ; E) chelicera ; F) venter. (Scale A and F 1 unit = 80 µm ; B, C, D and E 1 unit = 40 µm).
aid of a graticule in the eyepiece of the microscope.

Family Parasitidae Oudemans, 1901

Genus Poecilochirus G. and R. Canestrini, 1882

Poecilochirus subterraneus (Müller, 1860)

■ MALE: The idiosoma measures 616 μm long and 400-408 μm wide. It is divided dorsally by a median transverse suture (fig. 1A). The podonotal region bears 22 pairs of simple setae. The opisthonotal region bears 37 pairs of simple setae of fairly uniform length.

The tritosternum has a short narrow base with pilose laciniae (fig. 1F). The ventral setae are slender and uniform in length. The peritremes extends from coxae I to coxae IV.

The tectum comprises a tapering flat process with a pointed tip which is flanked by a pair of smaller points (fig. 1D). The chelicera is shown in figure 1E. The venter of the gnathosoma is shown in figure 1B. The corniculi are swollen and strongly hooked. The palpcoxal setae are pilose. The spurs and stout setae of leg II are shown in figure 1C.

Material: 2 α♂ from a mole corpse at Bramham Park, West Yorkshire (SE 425405) 1980. The specimens will be deposited in the British Museum (Natural History), London.

DISCUSSION

HYATT (1980) figures the four British species of Poecilochirus. This includes the males of P. carabi, Poecilochirus australasiaticus Vitzthum and P. davydovae. The figures of P. davydovae are after DAVYDOVA (1976). HYATT's (1980) transfer of DAVYDOVA's (1976) figures of P. subterraneus (Müller) to the new species P. davydovae is confirmed by the two males described in this paper. They differ from DAVYDOVA's (1976) figures with respect to the length of the dorsal setae. This is also the best character for the separation of the deutonymphs. The dorsal setae of P. subterraneus are longer than P. davydovae. Males of P. subterraneus and P. davydovae are similar in size. They may be distinguished from males of P. carabi and P. australasiaticus on the basis of the length of the idiosoma, the former measuring 1 200-1 300 μm and the latter 792-828 μm (HYATT, 1980).

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