

DESCRIPTIONS OF *HOPLOPLEURA AETHOMYDIS* N. SP. AND OF THE MALE OF *POLYPLAX SOLIVAGA* (ANOPLURA: HOPLOPLEURIDAE)

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ABSTRACT

KLEYNHANS, K. P. N. Descriptions of *Hoplopleura aethomydis* n. sp. and of the male of *Polyplax solivaga* (Anoplura: Hoplopleuridae). *Onderstepoort J. vet. Res.*, 36 (2), 299-302, 1969.

A new species of *Hoplopleura* Enderlein, 1904 and the previously unknown male of *Polyplax solivaga* Johnson, 1962 are described and illustrated.

INTRODUCTION

The anopluran genera *Polyplax* Enderlein, 1904 and *Hoplopleura* Enderlein, 1904 have a world-wide distribution on rodents, mainly on members of the family Muridae. The two species described in this paper were found among some unidentified and incorrectly classified material in the Onderstepoort and Durban Museum collections of Anoplura. The types of the new species are in the Onderstepoort collection.

DESCRIPTIONS

Hoplopleura aethomydis n. sp.

Record

One female, holotype, plus a female and two male paratypes from *Praomys arborarius* (Peters, 1852) [now known as *Aethomys (Micaelamys) namaquensis* (A. Smith, 1834)], Zoutpansberg district, northern Transvaal, 27 July 1927, G. A. H. Bedford collector.

Description

Female: Head [Fig. 1(a)] longer than wide, truncate in front. Preantennal margins straight and converging; postantennal margins smoothly rounded. Antero-ventral head plate seta about as long as basal antennal segment.

Thorax with all dorsal setae short, about as long as diameter of spiracle. Thoracic sternal plate [Fig. 1(d)] about one and a half times longer than wide. Legs not distinctive.

Abdomen dorsally with 17 and ventrally with 16 rows of stout, sword-shaped setae. First sternal plate of segment III with two enlarged setae on either side and a very small seta mesad of each pair. Paratergal plates scaly; plates II and III with both apical lobes slender; plates IV and V with both lobes broad and slightly bilobate; plate VI with both lobes slender; plate VII with only the dorsal lobe and plate VIII with neither of the apical lobes developed. Genitalia not distinctive.

Length: 1.2 to 1.3 mm

Male: Head as in female, but third antennal segment dorsally with an enlarged, posteriorly directed seta [Fig. 1(e)].

Thorax and legs as in female.

Abdomen dorsally with seven and ventrally with 12 rows of sword-shaped setae. First sternal plate of segment III with very small paramedian setae, as in female. Paratergal plates [Fig. 1(c)] as in female, but dorsal lobe of plate V slender, or only very slightly subdivided. In one male paratype only the dorsal lobe of plate VI appears to be developed. Genitalia [Fig. 1(f)] with pseudopenis sharply pointed apically and protruding beyond apices of parameres.

Length: 1.1 mm

Discussion

H. aethomydis is a member of a small group of species which is intermediate between the *enormis* and *hesperomydis-affinis* groups of *Hoplopleura*. The distinguishing features of this group are the short setae on the dorsum of the thorax (as in the *enormis* group) and the relatively long posterior process of the thoracic sternal plate (as in the *hesperomydis-affinis* group). *H. aethomydis* shows some similarity to *Hoplopleura patersoni* Johnson, 1960 in general appearance, but differs in that the two paramedian setae on the first sternal plate of the third abdominal segment are very small, in lacking a distinct constriction anteriorly on each of paratergal plates III to VII, and in having both the apical lobes of paratergal plate VI slender. The new species can be distinguished from *Hoplopleura somereni* Waterston, 1923 in that the apical lobes of paratergal plates IV and V are only slightly emarginated; from *Hoplopleura laticeps* Ferris, 1921 in that only the dorsal lobe of paratergal plate VII is developed, and in having both lobes of plate III slender and pointed; and from *Hoplopleura dendromuris* Johnson, 1962 in that neither of the lobes of paratergal plate VIII is developed.

Polyplax solivaga Johnson, 1962

Polyplax solivaga Johnson, 1962, *Proc. ent. Soc. Wash.*, 64, 160.

Polyplax gracilis Fahrenholz, 1910, *sensu* Ferris, 1916, *Ann. Durban Mus.*, 1, 240.

Polyplax cummingsi Ferris, 1916, *sensu* Ferris, 1923, *Stanford Univ. Publs. biol. Sci.*, 2, 213; Bedford, 1929, *Rep. vet. Res. Un. S. Afr.*, 15, 504; Bedford, 1932, *Rep. vet. Res. Un. S. Afr.*, 18, 404.

Polyplax otomydis Cummings, 1912, *sensu* Ferris, 1951, *Mem. Pacif. Cst. ent. Soc.*, 1, 208.

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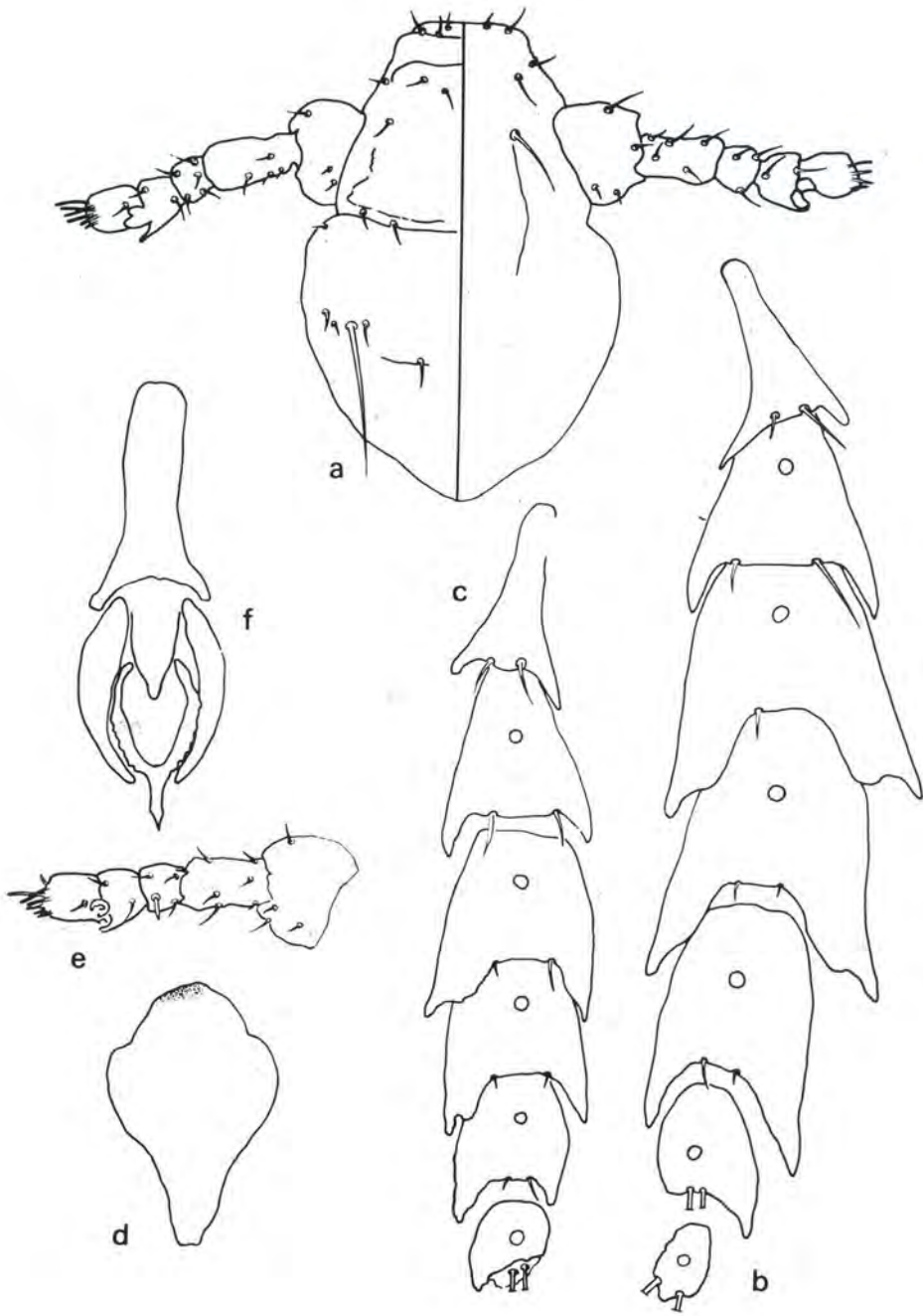


FIG. 1.—*H. aethomydis*. (a) Head, female; (b) paratergal plates II–VIII, female; (c) paratergal plates II–VII, male; (d) thoracic sternal plate, female; (e) antenna, male; (f) genitalia, male

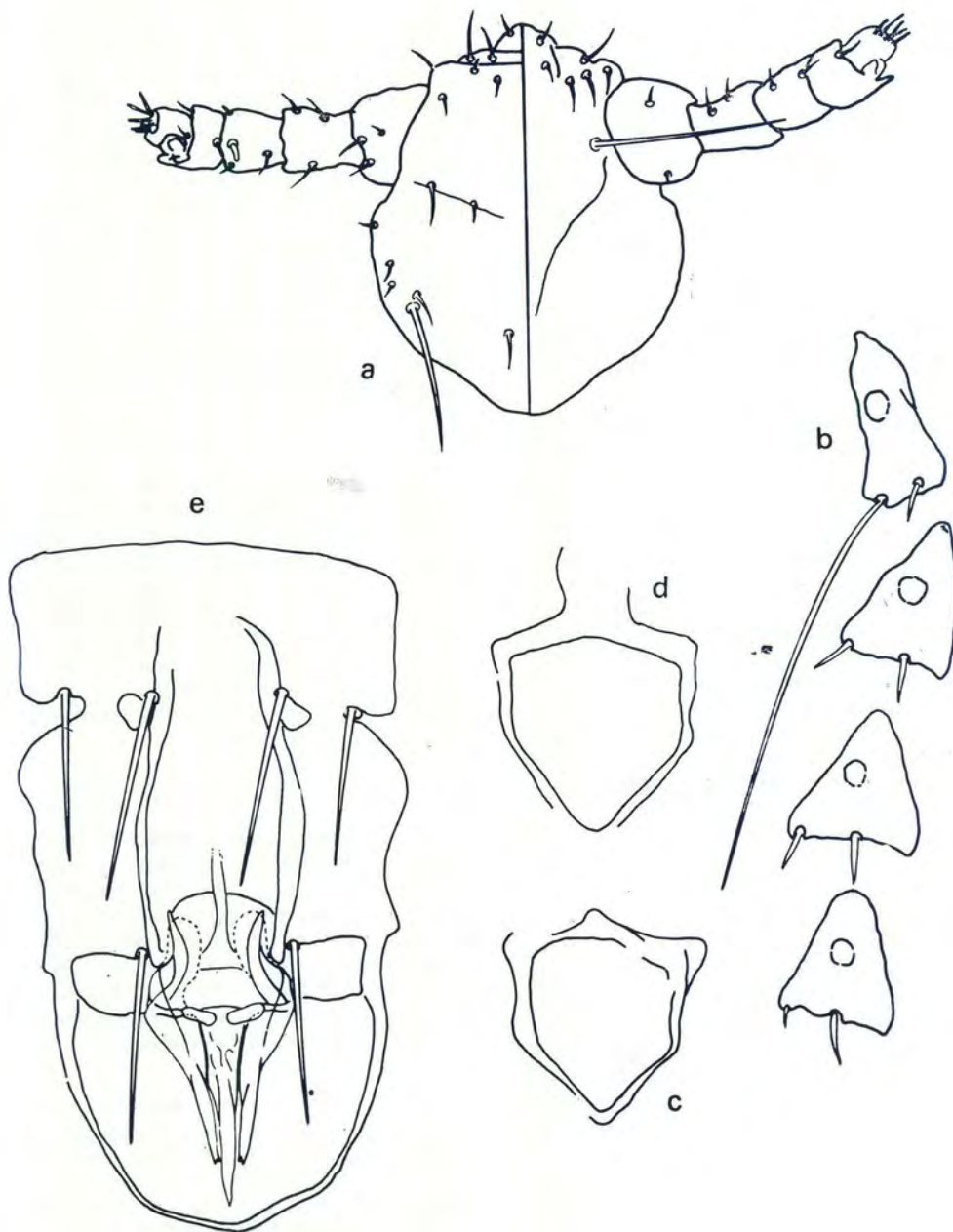


FIG. 2.—*P. solivaga* male. (a) Head; (b) paratergal plates III–VI; (c) thoracic sternal plate, Sycamore specimen; (d) thoracic sternal plate, Mfongosi specimens; (e) genitalia

Record

One male from *Aethomys (Aethomys) chrysophilus* (de Winton, 1897), Sycamore, eastern Transvaal, 27 October 1927, G. A. H. Bedford collector; two males from *Mus chrysophilus* (de Winton, 1897) [now known as *A. (A.) chrysophilus*], Mfongosi, Zululand, W.E. Jones collector, Durban Museum No. 1740.

Description

Male: Head [Fig. 2(a)] longer than wide, and with only two outer sutural setae on either side, as in the female. Basal antennal segment very slightly enlarged; dorsal posteriorly directed seta on third antennal segment slightly larger than seta on fourth segment. Antero-ventral head plate seta as long as first two antennal segments.

Thoracic sternal plate as in female [Fig. 2(c)]; in one of the Mfongosi specimens there is a faint indication of a membranous anterior prolongation of the plate [Fig. 2(d)].

Sternal and tergal plates of the abdomen not reduced. Segments II and III each with two sternal plates and two rows of setae. Number of setae in sternal rows as follows, starting from anterior-most row: 4 to 6, 4, 4 to 6, 3 to 4, 6, 6 to 7, 4, 2. Typical tergal row with eight setae. Segment VII ventrally and segment VIII dorsally each with a seta off the plate on either side. Ventral apical lobes of paratergal plates III to VI broad and slightly scaly; apical setae of plates IV and V about a third as long as the corresponding plate. Sternal plates of segments VII and VIII fused between the posteromarginal setae of plate VII. Sternal plate VIII fused laterally with the genital plate. Genitalia [Fig. 2(e)] with the long, narrow pseudopenis protruding for about a quarter of its length beyond the apices of the parameres.

Length: 0.7. to 0.8. mm

Discussion

The original description of *P. solivaga* was based on four female specimens collected off *A. (A.) chrysophilus* in eastern Transvaal. A male and several female specimens of *Polyplax* from this host, also from eastern Transvaal, were recorded as *P. cummingsi* by Bedford (1929; 1932). Johnson (1962) stated that these specimens might possibly be *P. solivaga*. This has been confirmed by a comparison of the female specimens of Bedford with the holotype and a paratype of *P. solivaga*.

The Durban Museum specimens from *A. (A.) chrysophilus* were originally determined as *P. gracilis* by Ferris (1916), and subsequently as *P. cummingsi* by the same author (1923). The latter species was placed in synonymy with *P. otomydis* by Ferris (1951) but reinstated as a valid species by Paterson & Thompson (1953). Johnson (1962) examined the specimens and stated that they appeared to be *P. cummingsi*. They are certainly not this species, and are distinguished in the female mainly by the more or less anteriorly pointed head (broadly rounded in *P. cummingsi*), by the broad, rounded apical lobes and relatively short apical setae of paratergal plates IV to VI (the lobes slender and pointed and the apical setae relatively long in *P. cummingsi*), and by the number of setae carried on the second sternal plate of

the abdomen (two long and two short setae as against four long and two short in *P. cummingsi*). The female specimens agree very well with the types of *P. solivaga*, even to the extent of sharing the same host.

P. solivaga is a member of the *otomydis* group, and is distinguishable in the male from all the species in the group for which males have been described by having only two outer sutural head setae on either side of the head. Moreover it differs from *Polyplax myotomydis* Johnson, 1960 in that the fourth antennal segment is not reduced to a thin sclerotized strip; from *Polyplax deomydis* Benoit, 1965 in not having the apex of the posterior process of the thoracic sternal plate expanded; from *P. otomydis* in that the thoracic sternal plate lacks a well developed anterior process; from *Polyplax paradoxa* Johnson, 1962 and *P. cummingsi* in that the apical setae of paratergal plates IV and V are about a third as long as the corresponding plate, not minute as in *P. cummingsi* or about half as long as the plates as in *P. paradoxa*.

SUMMARY

H. aethomydis n.sp. and the male of *P. solivaga* are described and illustrated. *H. aethomydis* is a member of a group of *Hoplopleura* which forms a link between the *enormis* and *hesperomydis-affinis* groups. The new species is nearest to *H. patersoni*, but may be distinguished by the small paramedian setae on the second sternal plate of the abdomen, the unconstricted paratergal plates, and the slender apical lobes of paratergal plate VI. *P. solivaga* is distinguished by the presence of only two outer sutural head setae on either side of the head.

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