INTRODUCTION

During my study of neopygmephorid mites of Crimea I found a new species of Pseudopygme- phorus phoretic on dung beetles Aphodius fimetarius (Linnaeus, 1758). The purpose of this paper is to describe the new species. This paper follows the system of Pygmephoroida proposed by Khaustov (2008).

MATERIALS AND METHODS

Mites were collected from coxae I of dung beetles Aphodius fimetarius (Linnaeus, 1758) and mounted on slides (Hoyer’s medium). In the description, the terminology follows Lindquist (1986). All measurements are given in micrometers (μm) for the holotype. In the description of leg chaetotaxy the number of solenidia are given in parenthesis.

SYSTEMATICS

Family Neopygmephoridae Cross, 1965
Genus Pseudopygmeaphorus Cross, 1965

Type species: Pygmephorus tarsalis Hirst, 1921 by subsequent designation.

Diagnosis. Female. Gnathosoma. Gnathosoma capsule slightly longer than its width, dorsally with two pair of setae (ch₁ and ch₂). Dorsal medial apodeme usually present. Ventrally with 1 pair of setae su and sometimes with pair of pits (vestiges of setae su₁). Palps free, articulated with gnathosomal capsule, bearing setae dFₑ and dGₑ dorsolaterally, small solenidion and accessory setigeneus structure ventrally, and small terminal claw. Pharyngeal pump II oval, subequal with pump III.

Idiosomal dorsum. Prodorsum with 2 pairs of setae (v₂, s₂) and pair of capititate trichobothria (sc₂), and pair of stigmata. Posterior margin of prodorsal plate usually not separated from tergite C by area of soft cuticle. Posterior margin of tergites C usually not deeply concave. Two pairs of cupules (ia, ib) present on tergites D and H, respectively. A pair of small pores usually present on tergites C and D, and two pairs on tergite EF. Dorsal setae not modified, usually weakly barbed.

Idiosomal venter. Epimeres I and II with two pairs of setae each. Setae 1b probably always bifurcate. Apodemes 2 joined with presternal apodeme. Apodemes 3 usually well developed. Apodemes IV short, reaching to base of setae 3b. Apodemes 5 absent. Setae 4a present. All setae of posterior sternal plate usually smooth, or indistinctly barbed, relatively short, pointed. Posterior margin of posterior sternal plate entire. Three pairs of pseudanal setae (ps₁–ps₃), which are usually simple, not modified. Setae ps₁ and ps₂ usually subequal, situated close to each other.

Legs. Leg I. Tibiotarsus of leg I usually with deep dorsal depression, without pinnaculum, tarsal claw from relatively small, simple to very large, situated on very short to relatively long pretarsus. Modified setae uc’ and uc” joined to form structure opposing claw. Setae k seta-like. Solenidion o₁ characteristically joined by all its length with tibiotarsus. Setae dFₑ hook-like. Setal formula: Tr₁–Fe₃–Ge₄–Tiₚ₁₆(4). Legs II–IV without modified setae. Leg II. Setal formula: Tr₁–Fe₃–Ge₃–Tiₚ₄₄(1)–Taₖ₆(1). Claws usually simple, empodium large. Leg III. Setal formula: Tr₁–Fe₂–Ge₂–Tiₕ₄(1)–Taₖ₆(1). Claws well developed, simple, empodium large. Tarsus IV not extremely long, with short pretarsus.

Species included. Pseudopygmeaphorus abdo- nalis (Berlese, 1904) (Italy), P. stercoricola (Berlese, 1911) (Italy), P. tarsalis (Hirst, 1921) (Great Britain), P. madanlarae (Ramaraju et Madanlar, 1997) comb. n. (from Pygmephorus, Turkey), P. urlaensis (Ramaraju et Madanlar, 1997) comb. n. (from Pygmephorus, Turkey), P.

Remarks. Cross (1965) placed 16 species in the genus Pseudopygmephorus. Some of them were recently transferred by Khaustov (2009) to the genus Kerdabania Khaustov, 2009. Some species described in the genus Pseudopygmephorus, such as P. atypoides Rack, 1983, P. latipilosus Rack, 1967 on my opinion should be excluded from this genus and transferred to the genus Bakerdania Sasa, 1961.

Pseudopygmephorus aphodii Khaustov sp. n.

Figs. 1–7.

Description. Female. Idiosomal length: 234, width 135.

Gnathosoma (Figs. 1–2). Dorsal medial apodeme well developed. Pair of ventral setae su and pits are present. Pharyngeal pumps as on fig. 7.

Idiosomal dorsum (Fig. 1). Tergites well sclerotized, with numerous small dimples. Stigmata large, round. Dorsal setae barbed, except for smooth v2. Setae c1, d, f, and h1 obtuse, other dorsal setae pointed. A pair of small pores present on tergites C and D, and two pairs on tergite EF. Length of dorsal setae: v2 28, sc2 53, c1 33, c2 64, d 35, e 26, f 40, h1 37, h2 23. Distances between dorsal setae: v2–v2 30, sc2–sc2 28, c1–c2 55, c2–c2 23, d–d 61, e–f 7, f–f 73, h1–h1 40, h1–h2 21. Trichobothrium with short thin stem, distally spherical.

Idiosomal venter (Fig. 2). Setae 1b bifurcate. Setae 1a and 2a distinctly barbed, other ventral se-
A new species of mites of the genus *Pseudopygmephorus*
tae smooth. All ventral plates with numerous small dimples. Apodemes 1 and 2 well developed and joined with presternal apodeme; presternal and sejugal apodemes well developed; apodemes 3 well developed, diffuse, their ends with distinct small sclerotized structures. Apodemes 4 well sclerotized and reaching base of setae 3b, apodemes 5 not developed. Posterior margin of posterior sternal plate almost straight, or weakly concave in middle part. Length of ventral setae: 1a 32, 1b 25, 2a 33, 2b 22, 3a 23, 3b 26, 3c 24, 4a 32, 4b 42, 4c 32, ps 15, ps 15, ps 22.

Legs (Figs. 3–6). Leg I (Fig. 3). Tibiotarsus very thick, massive, with large terminal claw situated on very short pretarsus. Solenidion ω, completely joined with tibiotorus. Solenidia ω1, 6 = ω2, 6 < ω1, 10 > ω, 6; ω2 and ω3 uniformly thin, ω3 clavate. Setae dFel broadened, hook-like. Leg II (Fig. 4). Tarsus with sickle-like padded claws and large empodium. Solenidion ω 10 finger-shaped, solenidion ϕ weakly visible. Setae dFelII pointed. Leg III (Fig. 5). Claws of same shape as on tarsus II. Solenidion ϕ weakly visible. Setae dFelIII obtuse. Leg IV (Fig. 6). Tarsus with two well developed simple claws. Solenidion ϕ weakly visible. Setae dFelIV and ϕ"IIIV smooth obtuse.

**Male** and **larva** unknown.

**Type material.** Female holotype, slide # AK200300, UKRAINE, Crimea, Yalta, settl. Nikita, on *Aphodius fimetarius* in cow dung, 20 March 2000, coll. A.A. Khaustov; paratypes: 1 male, same data; 7 females, UKRAINE, Crimea, vicinity of Yalta, on *Aphodius fimetarius* in cow dung, 4 November 2001, coll. A.A. Khaustov.

**Type depositories.** The holotype is deposited at the collection of the Department of Nature Conservation, Nikita Botanical Gardens — National Scientific Center, Yalta, Ukraine.

**Etymology.** The name *aphodii* refers to the generic name of the coleopteran host of the new species.

**Differential diagnosis.** The new species is most similar to *P.agarici* Zou, Gao et Ma, 1990 by the shape of the posterior margin of the posterior sternal plate and the round stigmata, but differs by the thicker tibiotorus I (twice as thick as compared to *P.agarici*), setae 2b which are smooth and distinctly shorter than 2a (in *P.agarici*...
ci 2b barbed and subequal with 2a), and the absence of the secondary transverse apodeme (present in \textit{P. agarici}).

REFERENCES


