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NOTES ON TWO PHORETIC HYPOPI (ACARINA: GLYCYPHAGIDAE) ON MAMMALS, INCLUDING A DESCRIPTION OF *DERMACARUS SPERMOPHILUS* SP. N.

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ABSTRACT: A new species of glycyphagid mite, *Dermacarus spermophilus*, is described from *Spermophilus lateralis* Say (Sciuridae) from Oregon, and *Dermacarus hylandi* Fain 1969 is completely figured for the first time.

A number of species have been described in the genus *Dermacarus* Haller 1880. However, most of them are based only on the hypopial form. Recently Fain and Lukoschus (1974) succeeded in rearing the adults of *Dermacarus hypudaei* Koch 1841 from the hypopial stage. The adults obtained could not be distinguished from adults of the genus *Glycyphagus*, and the species was therefore transferred (Fain and Lukoschus, 1974) from *Dermacarus* to *Glycyphagus*, subgenus *Myacarus* as described by Zachvatkin (1941). Also, *Dermacarus ondatrae* Rupes and Whitaker 1968 has been removed from *Dermacarus*. The hypopi of this species are morphologically close to those of *G. hypudaei*. However, adult morphology has caused this species to be placed in the genus *Zibethacarus* (Rupes, Yunker, and Wilson, 1971; see also Fain and Lukoschus, 1974). Hypopi can be described in the genus *Dermacarus*, but these cases make it clear that generic relationships cannot be determined until adults are available for the various species.

Dermacarus hylandi belongs to the *hypudaei* group of hypopi. Since adults are not known, it is impossible to determine to which genus it really belongs. We therefore leave it provisionally in the genus *Dermacarus*. The posterior portion of *Dermacarus hylandi* was figured by Fain (1969) and Fain and Whitaker (1973), but no complete figure of this species has been published.

The purpose of this paper is to describe *Dermacarus spermophilus* sp. n. and to present a complete figure of *D. hylandi*.

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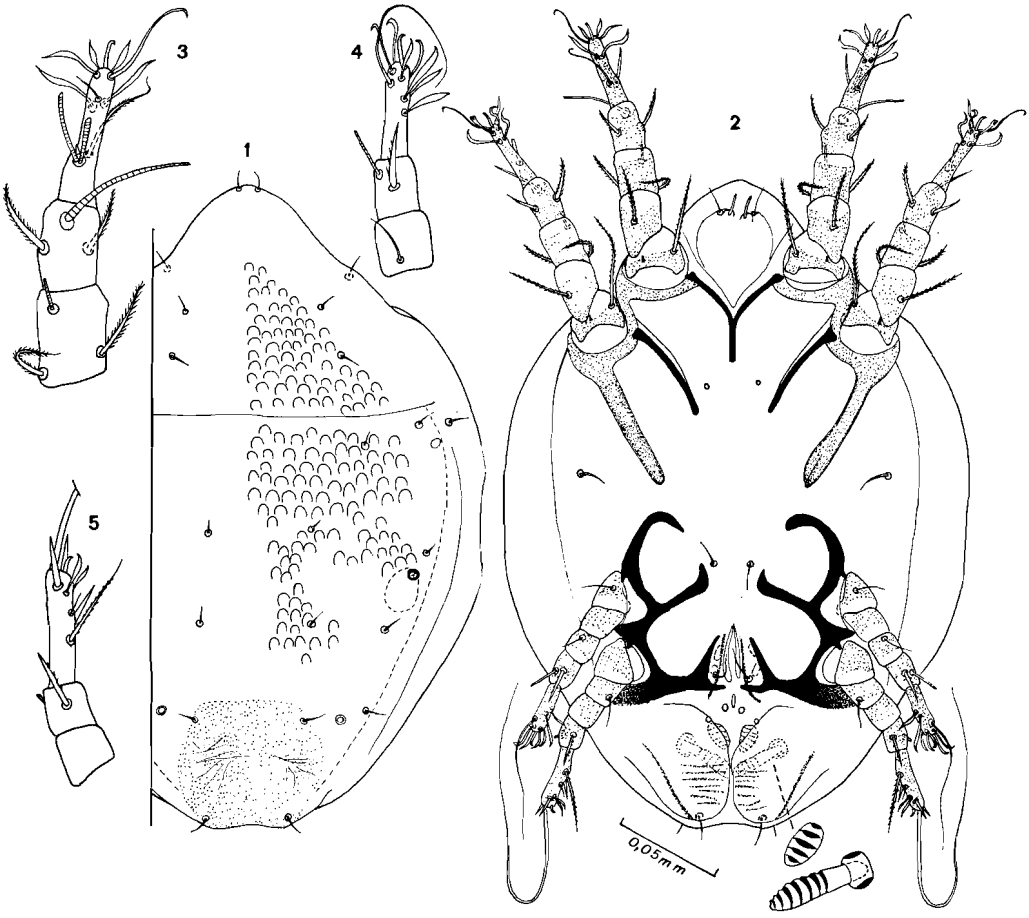
Dermacarus hylandi Fain 1969
(Figs. 1–5)

This species was originally described from a single hypopus from *Clethrionomys gapperi* (Vigors) from Rhode Island (Fain, 1969), but Fain et al. (1971) found 26 specimens on the chipmunk *Tamias striatus* (Linnaeus), from Canada. Fain and Whitaker (1973) reported two additional specimens from chipmunks from Indiana, and the junior author has now found over 1,800 individuals from 71 chipmunks from several Indiana localities. Fain et al. (1971) found only minor differences between the holotype and specimens from *Tamias striatus* and most of the measurements from five Indiana specimens were within the limits given by Fain et al. We give here a complete drawing of the holotype of this species.

Dermacarus spermophilus sp. n.
(Figs. 6–10)

In this new species epimera and epimerites III are not fused, but the seta of femur I is very long and bare, while that of femur II is barbed and much shorter. This combination of characters is shared among North American species only by *Dermacarus newyorkensis* Fain 1969, and by a new species of *Dermacarus* currently being described by Spicka and Gerrits (in press). *Dermacarus spermophilus* is well separable from *D. newyorkensis* by the following characters: (1) solenidia *alpha* (on palposoma) much shorter; (2) internal claspers of pilicolous organ narrower, about twice as long as wide; (3) clasping organ much shorter; (4) body less elongate; (5) the pre-



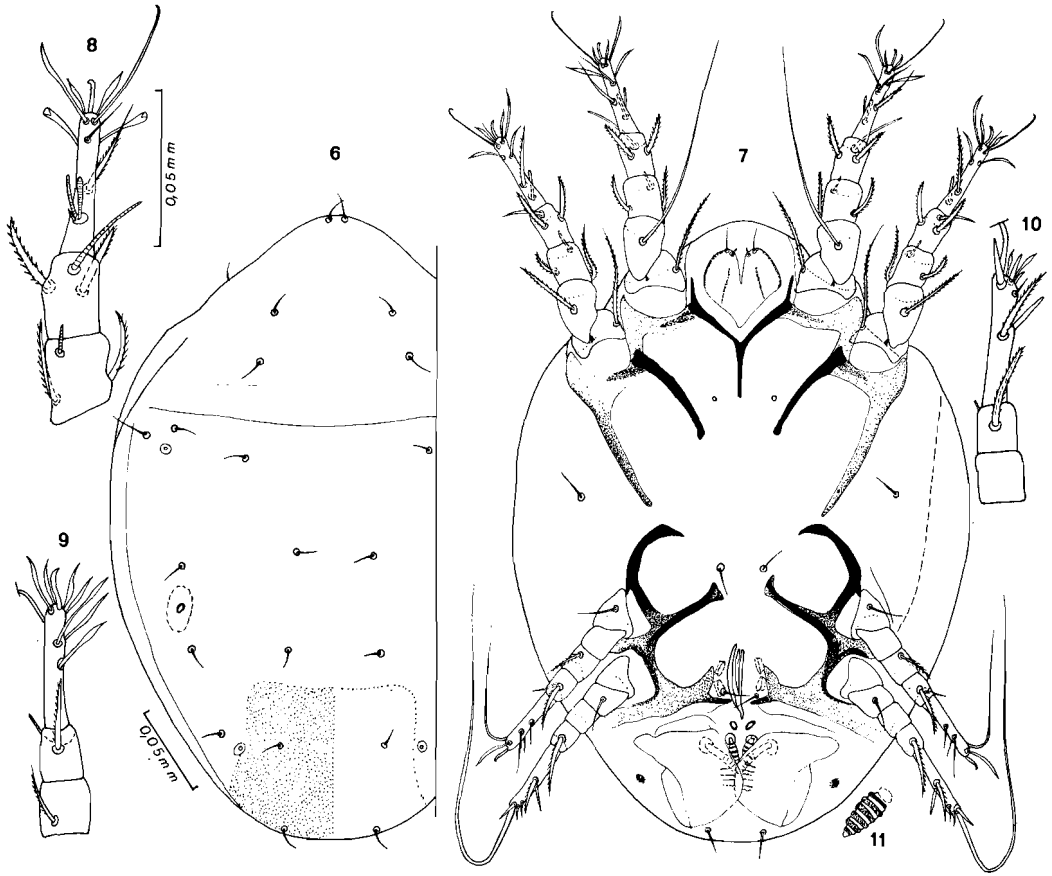
FIGURES 1–5. *Dermacarus hylandi* Fain. Holotype hypopus in **1.** dorsal, and **2.** ventral view. **3.** Tarsus, tibia, and genu I. **4.** III, and **5.** IV.

apical dorsal seta of tarsi I–II is thin; (6) the solenidia *w1* and *w3* are situated in the basal third of tarsus I. It is much closer to the new species from *Spermophilus tridecemlineatus*, however. It can be distinguished from that species by (1) the seta on femur III is pectinate rather than simple; (2) there is no glandular opening mesial to the sh seta; (3) the palposomal solenidion is about 5 to 6 μm long rather than about 8 to 10 μm; (4) the absence of a network of lines on the dorsum.

Hypopus: Idiosoma 360 μm long, 255 μm wide. Sejugal furrow well developed. Cuticle smooth except in posterior part of dorsum, where a poorly sclerotized shield is visible. Dorsal setae short. Epimera I fused into a Y, other epimerae free. Pilicolous organ short, poorly developed. Internal claspers about twice as long as wide with 5 to 6 ridges. External claspers with 7 ridges. Palposoma poorly developed, bilobed, with short solenidia *alpha* (5 μm long) and 1 pair of longer simple setae (18 μm). Legs: length of claws I–IV 12–12–10–4.5 μm. Femur I with a long bare seta (100–120 μm long), femur II with a shorter (36 μm) barbed seta. Tibiae and genua I–II with 2 strong barbed setae. Tibial setae of legs III–IV strong and barbed. Solenidia *w1* and *w3* relatively short and subequal in length, situated close together in the basal third of tarsus I.

Host and locality: The hypopi were attached to the hairs of a golden-mantled ground squirrel, *Spermophilus lateralis* (Sciuridae), Steens Mts., Harney Co., Oregon, taken by Chris Maser 13 July 1975 (holotype and 7 paratypes, all hypopi).

Holotype: In the U.S. National Museum, Washington, No. 3832. Paratypes in the collections of the authors.



FIGURES 6–11. *Dermacarus spermophilus* sp. n. Holotype hypopus in **6.** dorsal and **7.** ventral view. **8.** Tarsus, tibia, and genu I. **9.** III, and **10.** IV. **11.** Internal clasper.

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