

DIPODOMYDECTES AMERICANUS GEN. ET SP. N.
(ACARI: HYPODERIDAE) FROM THE KANGAROO RAT*

A. Fain† and F. S. Lukoschus‡

ABSTRACT: *Dipodomydectes americanus* is described from hypopi found in subcutaneous tissues of the kangaroo rat, *Dipodomys merriami* Mearns (Rodentia: Heteromyidae).

The hypoderid subfamily Muridectinae is previously known from a single genus, *Muridectes* Fain 1968. Four species are described and all are known only from the heteromorphic deutonymph, or hypopus. It is interesting to note that all these hypopi occur under the skin of rodents and have never been en-

countered in the hair follicles or attached to the hairs of their hosts. Further, these hypopi have been found either in desert rodents (*Heterocephalus glaber*, *Gerbillus nanus*, *Pedetes capensis*) or in rodents living in subterranean galleries (*Spalax*) (Fain and Lukoschus, 1977). The new species described here was also found under the skin of a desert rodent.

Received for publication 27 May 1977.

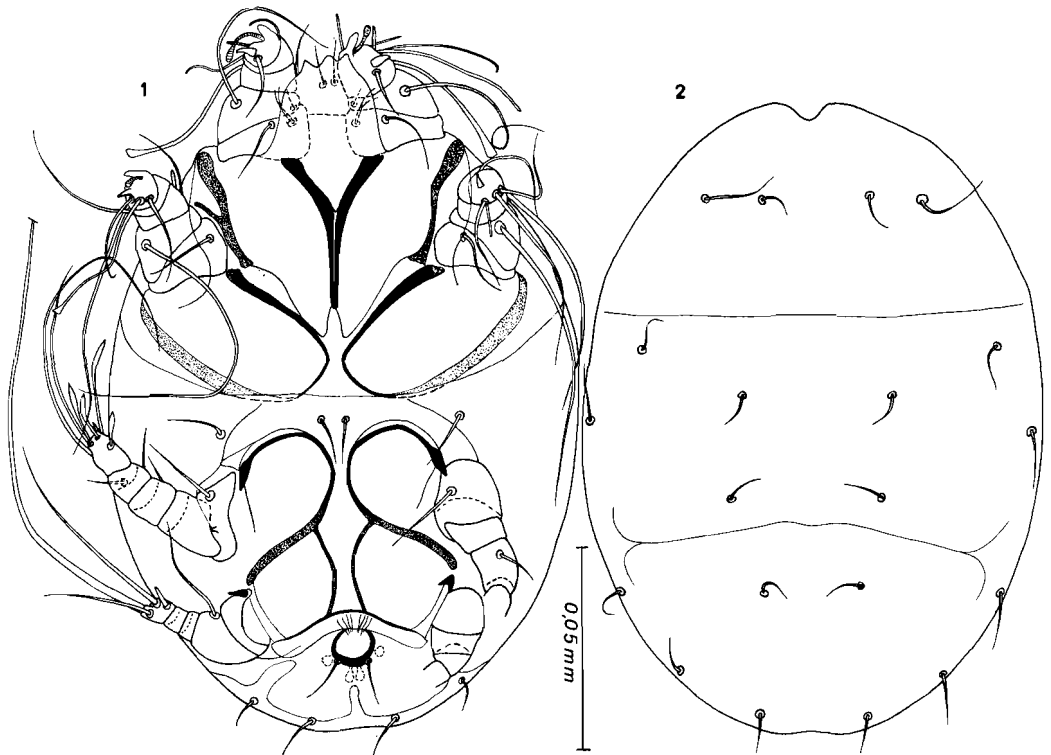
* Supported in part by Grant R 87-111 from the Netherlands Organization for the Advancement of Pure Research (Z.W.O.).

† Institute of Tropical Medicine, Antwerp, Belgium.

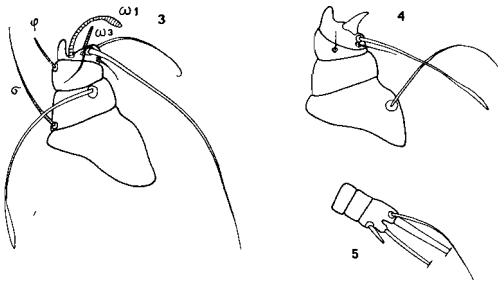
‡ Department of Zoology, University of Nijmegen, The Netherlands.

***Dipodomydectes* gen. n.**

Muridectinae (Fain 1968, 1969). With a ventral, tridentate transparent plate covering part of legs I and *o* *i* setae. Legs I, II short, thick; legs III relatively long. Tarsi I, II with digitiform apophysis. Tarsi III lacking long, strong, barbed



FIGURES 1, 2. *Dipodomydectes americanus* gen. et sp. n., holotype hypopus. 1. Ventral. 2. Idiosoma, dorsal.



FIGURES 3-5. *Dipodomys americanus* gen. et sp. n., hypopus. 3. Femur, genu, tibia, tarsus of leg I, dorsolateral. 4. Femur, genu, tibia, tarsus of leg I, ventral. 5. Genu, tibia, tarsus of leg IV, ventral.

apical seta; tibiae IV without setae. Epimerites IV well developed; fused with epimera IV, forming closed coxal fields. Genital orifice rounded; with sclerotized walls. Genital papillae situated close together, anterior to genital orifice.

Type species: Dipodomys americanus sp. n.

***Dipodomys americanus* sp. n.**

Hypopus (Figs. 1-5)

Holotype 165 μm long and 114 μm wide. Dorsum (Fig. 2) with 2 transverse furrows, sejugal and hysterosomal. Dorsal setae short. Venter (Fig. 1). Epimera I fused in Y, with long sternum. Epimera III and IV fused. Genital orifice rounded. Anus apparently absent. Palposoma not observed but there are 3 pairs of presternal setae: *v i* longest; *v e* more posterior, shorter; and a more posterior third pair, apparently bifid. All these setae covered by antero-ventral plate. Legs (Figs. 3-5). Legs I, II short and strong, legs III longer, legs IV distinctly shorter than legs III. All legs with 5 segments. Tarsi I, II wider than long, with digit-like apical process, 6 piliform setae, and 1 short, curved

spine. Tarsi III and IV with 6 and 4 setae, respectively. Tibiae with 1-1-1-0 setae. Solenidia: tarsi 2-1-0-0, tibiae 1-1-1-0, genua 1-1-0-0.

Remarks

The holotype and 1 paratype, both hypopi, were found under the skin of *Dipodomys merriami* Mearns (Rodentia: Heteromyidae), Quintoyacuito, Colorado River, 25.1.1894 (host in the Smithsonian Collection, No. 61505). Three additional paratypes, hypopi, were found in the same host from Pierce Ferry, Arizona (host No. 270797, Smithsonian Collection). Holotype in U.S. Museum of Natural History, Washington, Catalog No. 3833.

It has been suggested earlier (Fain, 1969) that the "subcutaneous" type of hypopi could be derived from the more primitive "endofollicular" type. The migration of the endofollicular hypopi into the subcutaneous tissues and their evolution to the *Muridectes* type has perhaps been in response to the rigorous habitats of the hosts. If this suggestion is correct we may expect to find such hypopi in other rodents living in these special biotopes.

LITERATURE CITED

- FAIN, A. 1968. Un hypope de la famille Hypoderidae Murray 1877 vivant sous la peau d'un rongeur (Hypoderidae: Sarcoptiformes). *Acarologia* 10: 11-115.
- . 1969. Les deutonymphes hypopiales vivant en association phoretique sur les Mammifères (Acarina: Sarcoptiformes). *Bull Inst R Sci Nat Belg* 45(33): 1-262.
- , AND F. S. LUKOSCHUS. 1977. New endofollicular or subcutaneous hypopi from mammals (Acarina: Astigmata). *Acarologia* (in press).