

A RECLASSIFICATION OF THE GENUS *APLODONTOPUS* (ACARI: SARCOPTIFORMES) WITH A DESCRIPTION OF *APLODONTOPUS MICRONYX* SP. N. FROM THE THIRTEEN-LINED GROUND SQUIRREL, *SPERMOPHILUS TRIDECIMLINEATUS*, IN INDIANA, USA

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ABSTRACT: The genus *Aplodontopus* is transferred from the family Glycyphagidae to the family Chortoglyphidae and a new species *Aplodontopus micronyx* is described. The new species is from the tail-hair follicles of *Spermophilus tridecemlineatus* in Indiana, USA; deutonymphs and a female are described.

The genus *Aplodontopus* is represented to date by two species: *A. latus* Fain 1967 (type-species), from *Aplodontia rufa* and *A. sciuricola* Hyland and Fain 1968, from *Tamias striatus*. Both species are from North America (Fain and Whitaker, 1973). The purpose of this paper is to describe a new species of *Aplodontopus*, and also to consider the familial relationships of the genus.

On *Spermophilus tridecemlineatus* the junior author discovered several hypopi of the genus *Aplodontopus* which are distinct from the two known species. He succeeded in rearing one of these hypopi to a female closely related to *A. sciuricola*. The present paper describes this new species (measurements are in micrometers).

Family Chortoglyphidae Berlese 1897
 (= **Aplodontopinae Fain 1969**)
Genus *Aplodontopus* Fain 1967
***Aplodontopus micronyx* sp. n.**

Hypopus (Figs. 2-3): Holotype 298 long by 160 wide. In 2 paratypes these measurements are: 282 by 140, 301 by 170. Cuticle poorly sclerotized. Sejugal furrow distinct. A second incomplete transverse furrow present between *d* 1 and *d* 2. Most of the dorsal setae short, cylindrical, and forked apically. The *d* 5 setae with a bifid base formed by two very unequal branches (this character visible only in well-cleared specimens). External pair of palposomal setae thick and 14 long, internal pair shorter and very thin. The *v* i setae thick and not barbed spines, a little thinner than external palposomal and 12 long, situated near palposomal setae. The *v* e setae strong, short, curved spines.

Pregenital shield as in *A. sciuricola* but pregenital median sclerite not forked apically. The *cx* III and *g* m setae thick and ovoid. Legs as in *A. sciuricola*.

Female (Figs. 1, 8-10): Only specimen obtained by rearing a hypopus and a tritonymph 320 long (idiosoma) by 235 wide. It possesses the general characters of *Aplodontopus sciuricola* Hyland and Fain.

Host and locality

The hypopial holotype and paratypes were found in the tail-hair follicles of the thirteen-lined ground squirrel, *Spermophilus tridecemlineatus*, in Vigo County, Indiana, Terre Haute, Rea Park, USA, 6 May 1975. (Holotype and 4 paratypes (specimens no. EJS 494).) One hypopus paratype from the same host 5 miles North Terre Haute on Route 41, 19 January 1973 (specimen no. EJS 438).

The single adult female paratype was reared from a hypopus from the same host. Same data as for the holotype.

Holotype in the U. S. National Museum, Washington No. 3751. Paratypes in the collections of the authors.

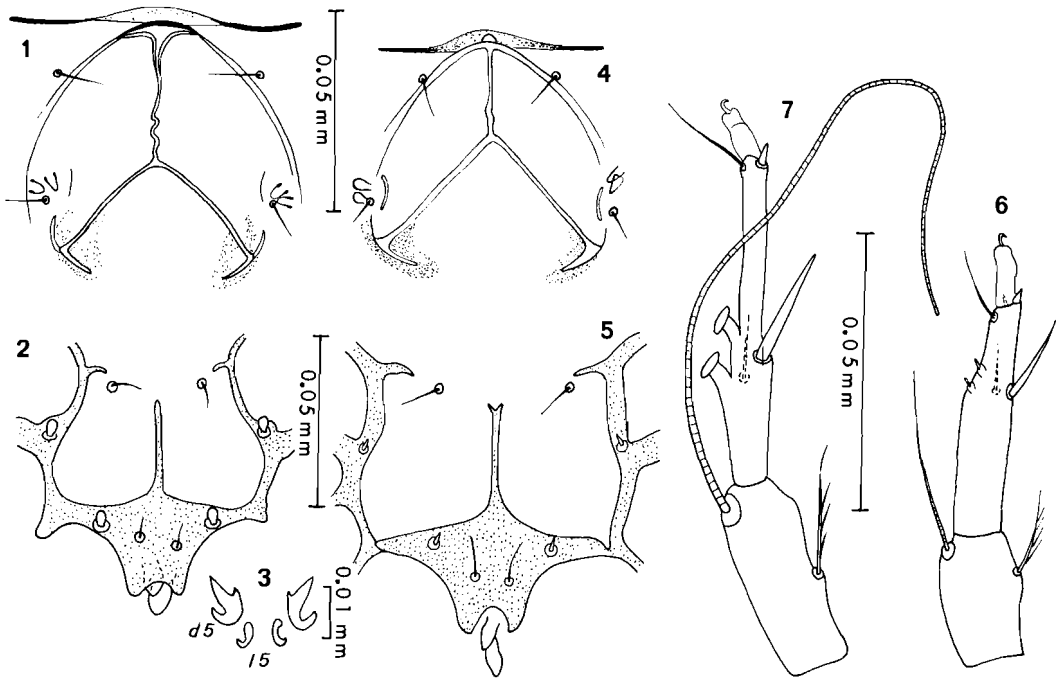
Diagnostic characters of *Aplodontopus micronyx* sp. n.

The hypopus is distinguished from that of *Aplodontopus latus* by the following characters: (1) the much smaller body, (2) the *v* i and *v* e setae which are thick and bare spines (in *A. latus* those setae are thin and barbed), (3) the much more posterior position of the *v* i setae, (4) the *d* 5 setae which are deeply and unequally divided basally. It is distinguished from the hypopus of *Aplodontopus sciuricola* (Fig. 5) by: (1) the absence of a fork at the end of the pregenital median sclerite, (2) the short and ovoid shape of the *cx* III and *g* m

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FIGURES 1-3. *Aplodontopus microrynx* sp. n. 1. Vulvar region in the adult female. 2. Pregenital shield and epimera III-IV in the hypopus. 3. Setae *d* 5 and *l* 5 in the hypopus.

FIGURES 4-6. *Aplodontopus sciuricola* Hyland and Fain. 4. Vulvar region in the female. 5. Pregenital shield and epimera III-IV in the hypopus (paratype). 6. Tibia and tarsus IV in the male (specimens received from Prof. K. Hyland).

FIGURE 7. *Chortoglyphus arcuatus* (Troupeau). Tibia and tarsus IV in the male (specimen from house dust in Strasbourg, France).

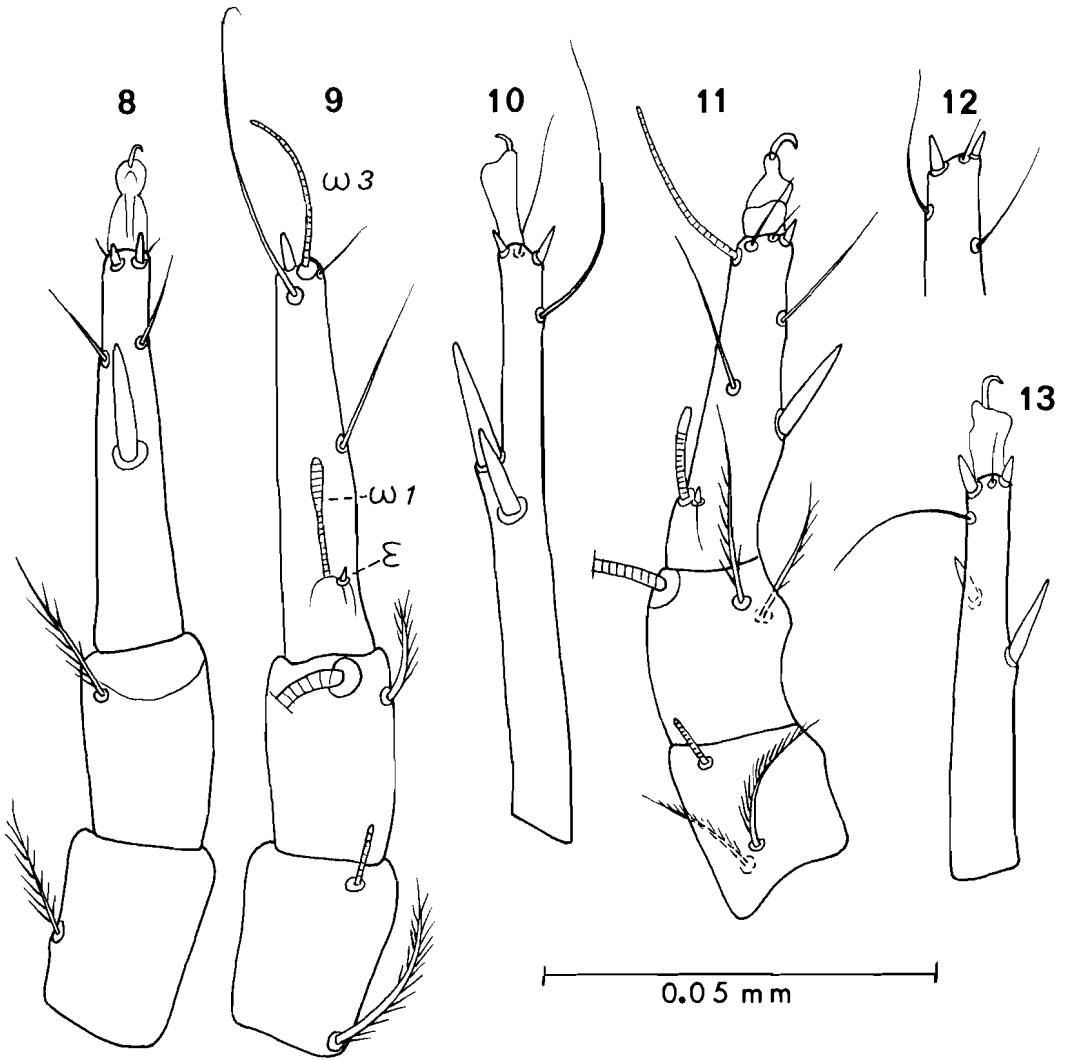
setae, (3) the *d* 5 setae which are deeply incised apically, (4) the smaller body, (5) the absence of barbs on the *vi*, *ve* and the external palposomal setae, (6) the shorter length of the scapular, dorsal, and lateral setae.

The female of *Aplodontopus microrynx* differs from that of *A. sciuricola* (Figs. 4, 11-13) in several characters: (1) the much smaller tarsal claws, (2) the longer length of all the tarsi (especially tarsus IV), (3) the different size and position of the setae on tarsus IV, (4) the ω 1 solenidion on tarsus I is longer, thinner, and bulbed apically (in *A. sciuricola* the ω 1 is shorter, thicker, and more or less cylindrical), (5) the longer length of the dorso-subapical setae of tarsus I, (6) the relatively shorter length of the posterior lip of the vulva.

Aplodontopus was previously known only from the hypopial stage, but Tadmowski and Hyland (1974) succeeded in rearing adults of

A. sciuricola. They stated that the adults obtained were very close to *Chortoglyphus arcuatus*. Through the kindness of Prof. K. Hyland, one of us (A. F.) was able to examine two males and several females of that species. It appears that the male of *A. sciuricola* differs from that of *C. arcuatus* mainly by having the suckers of tarsi IV represented by short and thin setae (Figs. 6-7) while in *C. arcuatus* these suckers are well developed. The life cycle of *A. latus* Fain is not known and it is not absolutely certain that it is congeneric with *A. sciuricola*, since Fain and Lukoschus (1974) recently showed that hypopi which are very similar morphologically may give rise to generically distinct adults.

We move the genus *Aplodontopus* from the family Glycyphagidae into the family Chortoglyphidae because of the similarity of the adults of *A. sciuricola* and *A. microrynx* sp. n. to *Chortoglyphus arcuatus*. *Aplodontopus latus* is



FIGURES 8-10. *Aplodontopus micronyx* sp. n. 8-9. Genu, tibia, and tarsus of female, ventral and dorsal view. 10. Tarsus IV of female.

FIGURES 11-13. *Aplodontopus sciuricola* Hyland and Fain. 11. Genu, tibia, and tarsus I of the female in anterodorsal view. 12. Apical extremity of tarsus I of the female in posterdorsal view. 13. Tarsus IV in the female (specimens received from Prof. K. Hyland).

placed in the family Chortoglyphidae because of the similarity of its deutonymphs to those of the two other species of *Aplodontopus*. Aplodontopinae is relegated to synonymy with Chortoglyphidae.

The genus *Chortoglyphus* presently contains two species, the cosmopolitan *C. arcuatus* (Troupeau) (= *Chortoglyphus nudus* Berlese), and *C. gracilipes* Banks 1917, known only from North America. It is not known if these species have a hypopial stage.

Corrigenda

Re-examination of the type-series of *Aplodontopus sciuricola* Hyland and Fain 1968 has revealed some discrepancies with the original figures given for that species. The following corrections should be made in these figures:

Figs. 1, 3: the antero-dorsal setae of genua I-II are 2 to 3 times longer and barbed.

Fig. 1: the setae of trochanters I-II are barbed; the seta *cx III* represented in the figure by a

small clear spot and the *l 5* represented by a fine short hair are minute spines similar to *g m* (in the figure *g m* is labeled *g a*, *g p* is labeled *g m* and *g a* is not labeled).

Fig. 2: the setae *d 5* are small spines directed forward.

In the present work we give a corrected drawing (Fig. 5) of the genital setae of *A. sciuricola*.

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