

TWO NEW MYOLOPTIDAE (ACARI, ASTIGMATA) FROM NORTH AMERICAN RODENTS

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ABSTRACT: Two new species of Myocoptidae (Acari, Astigmata) are described: *Myocoptes neotomae* sp. n. from *Neotoma floridana* and *Trichoecius gettingeri* sp. n. from *Peromyscus leucopus* both from the USA. *Myocoptes neotomae* sp. n. differs from *M. musculinus* by the absence of scales posterior to the hysteronotal shield, by the greater length of *l2* as compared to *d2* in the female, and by the much shorter *d1* and *d2* and the longer penis in the male. *Trichoecius gettingeri* differs from *T. tenax* by the shorter epimeres III, the much shorter setae *l1*, *d1* and *d2*, the absence of *l2* in the female, the absence of dorsal striations, the poorly developed epimeres I-II and the small size of male legs IV.

Information on myocoptids in general and North American myocoptids in particular has been summarized in Fain et al. (1970) and Fain and Hyland (1970), and information on ectoparasites of mammals of Indiana has been recently summarized by Whitaker (1982). We describe herein two new myocoptids from North American rodents: *Myocoptes neotomae* sp. n. from *Neotoma floridana* from Indiana and *Trichoecius gettingeri* sp. n. from *Peromyscus leucopus* from Pennsylvania.

Measurements are in μm unless noted.

DESCRIPTION

Genus *Myocoptes* (Claparede, 1869)

Myocoptes (Myocoptes) neotomae sp. n.

Female (Figs. 1, 2): Holotype 380 long (idiosoma) and 198 wide (maximum). Total length including gnathosoma 411. In 2 paratypes the idiosoma measures 360×186 and 378×205 . **Dorsum:** Propodonal shield small; posterior margin bearing a triangular scale. Hysteronotal shield rectangular, covered by large rounded scales. Cuticle posterior to shield striated, devoid of scales. Length of setae: *vi* 35; *sce* 90; *sci* 12; *d1* 33; *d2* 33; *d3* 35; *d4* 6; *d5* 7; *l1* 30; *l2* 60; *l3* 15; **Venter:** Coxae I without scales, coxae II with four or five rounded scales, coxae III with three or four scales, coxae IV with one larger scale. Scales absent anterior to vulva. Opisthogaster covered by very numerous, small, triangular scales beginning close to vulva and extending close to anus. Length of setae: *cx* I 45; *ga* 27; *gm* 48; *gp* 10; *ai* 30; *ae* 50; *a3* 9; *l4* 18; *l5* 250. Distance between *ai* and *ae* 15. Gnathosoma 48 long, 51 wide (at base). Legs as in *Myocoptes musculinus*.

Male (Figs. 3, 4): Paratype 243 long (idiosoma) and 171 wide. Posterior extremity with two triangular

membranous lobes 15 apart. **Dorsum:** Propodonal shield and scale as in female. Hysteronotum anterior median area very poorly sclerotized, bearing very short lines as in *M. musculinus*, posterior area with a strong longitudinal highly sclerotized sclerite more or less Y-shaped. **Venter:** Coxae II with four small rounded scales, coxae III with three rounded scales. Two pairs of paramedian scales anterior to genital organ. Penis

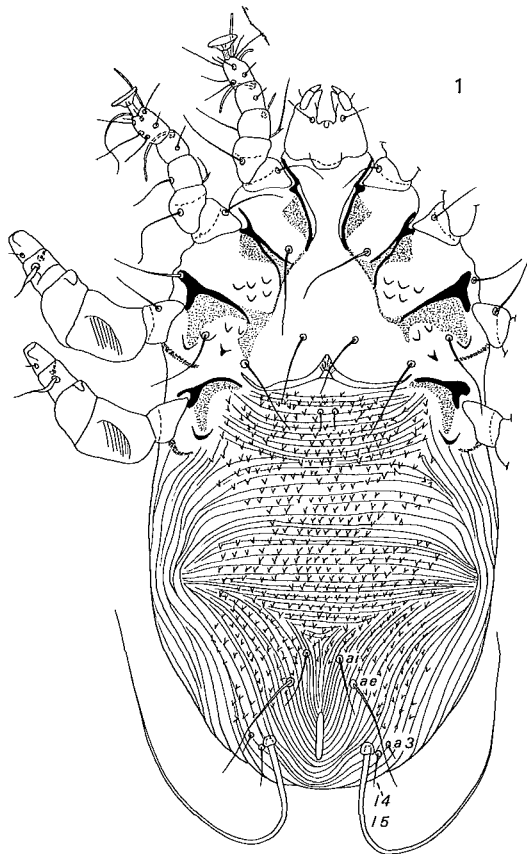
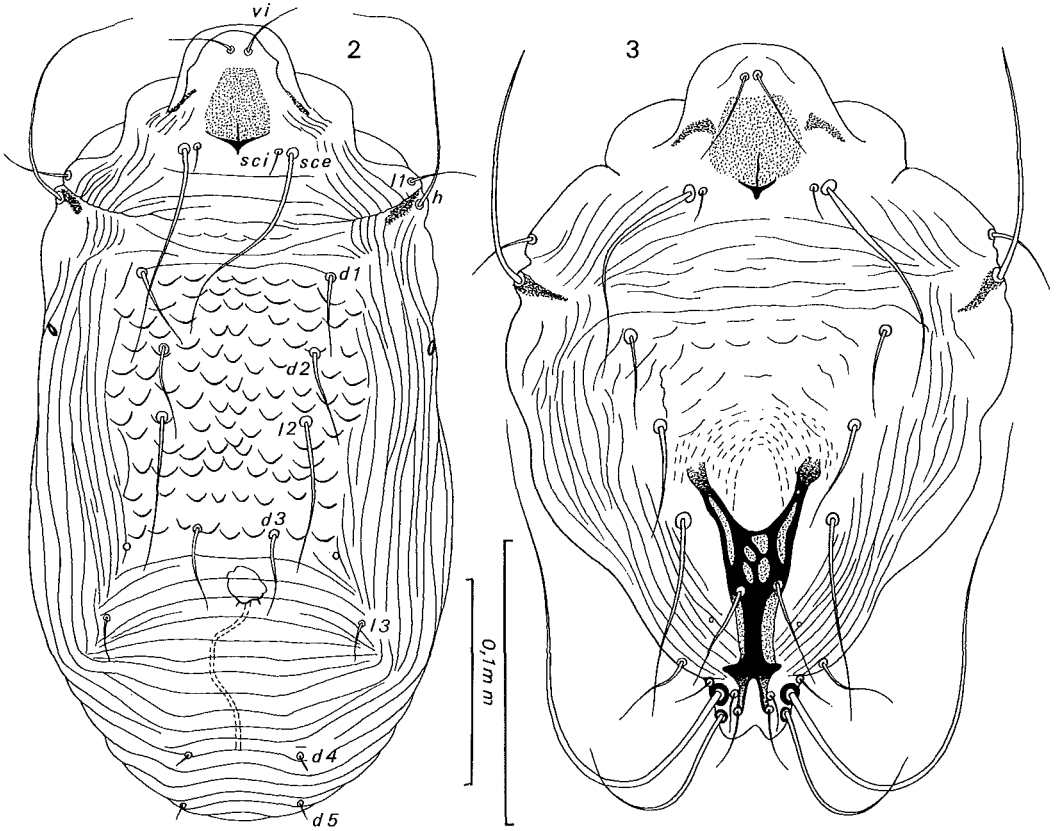


FIGURE 1. *Myocoptes (Myocoptes) neotomae* sp. n. Female, holotype, in ventral view.

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FIGURES 2, 3. *Mycoptes (Mycoptes) neotomae* sp. n. 2. Female in dorsal view. 3. Male in dorsal view.

base an inverted Y; cylindrical part narrow, 40 to 43 long. Anus flanked by two strong lateral sclerites. Preanal shield bilobed. Adanal suckers small (diameter 8 for the membranous ring and 4 for the sclerotized ring). Legs as in *M. musculus* but IV smaller. Trochanter IV with a triangular ventral scale. Chaetotaxy: *d1* 30; *d2* 36; *l2* 63; *d3* 45; *l3* 30; *d5* 75.

Type specimens

Holotype and seven paratype females, one paratype male from *Neotoma floridana*, Harrison Crawford State Forest, Harrison Co., Indiana, USA, 26 May 1982 (WWC 106). Holotype in U.S. National Museum, Washington, D.C. (No. 4048). Paratypes in collections of the authors.

Remarks

In the female of this species, the dorsum bears a median scaly and unpitted shield; coxae II and III bear a few (3–5) rounded scales. There are no scales anterior to the vulva and setae *l3* are much shorter than *d3* and *l2*. Only one other species, *M. musculus*, has this same combination of characters (Fain et al., 1970; Fain and Hyland, 1970). *Mycoptes neotomae* sp.n. differs from *M. musculus*, in the female by the absence of

scales posterior to the hysteronotal shield, the greater length of *l2* compared to that of *d2* and the smaller distance between *ai* and *ae* (15 vs. 45–63 in *M. musculus*). The male is distinguished from *M. musculus* by the much shorter *d1* and *d2*, the greater length of the penis, the stronger sclerotization of the perianal frame, the thinner legs IV and the different aspect of the dorsal Y sclerite.

**Genus *Trichoecius* Canestrini, 1899
Trichoecius gettingeri sp. n.**

This species is named for Mr. Donald Gettinger, who provided us with numerous interesting parasitic mites from various rodents.

Female (Figs. 5–8): Holotype 288 long (idiosoma) and 80 wide (maximum). Length and width of the idiosoma in five paratypes: 230 × 87; 255 × 90; 260 × 90; 265 × 83; 290 × 96. This last specimen was strongly flattened. *Dorsum*: Cuticle soft with transverse striations, without punctate shields. *Venter*: Opisthogaster striated. Epimeres I fused in a Y; epimeres II free; epimeres III very thick and crescentic; epimeres IV very short and free. Bursa very thin and long, with 10 to 12 loops, distally sclerotized and dilated. Copulatory orifice situated dorso-terminally 15 from post-



FIGURE 4. *Myocoptes (Myocoptes) neotomae* sp. n. Male in ventral view.

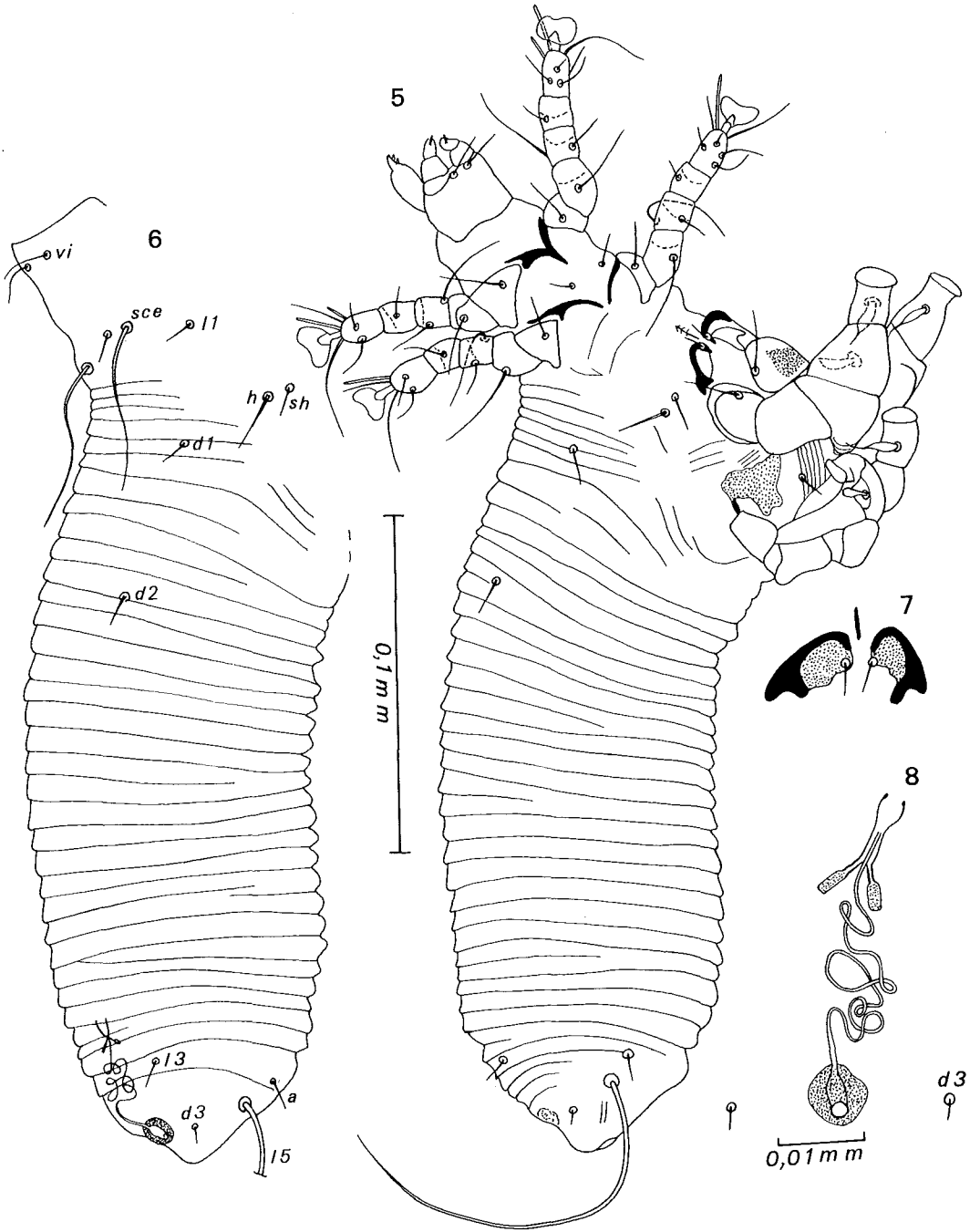
terior end and surrounded by a punctate area. Length of setae: *vi* 15; *sce* 50 to 60; *sci* 9; *h* 18; *sh* 8; *d1* 9; *d2* 9; *ll* 10; *l3* 8; *a* 6; *l5* 120. The setae *d5*, *l2* and *l4* are absent.

Male (Figs. 9, 10): Length of idiosoma 180, maximum width 115. Cuticle soft without striations. Opisthosoma trapezoidal, truncate posteriorly. Epimeres I short, becoming indistinct internally; epimeres II very short; epimeres III and IV free. Coxae II bearing an elongate cuticular scale. Genital organ thick, strongly

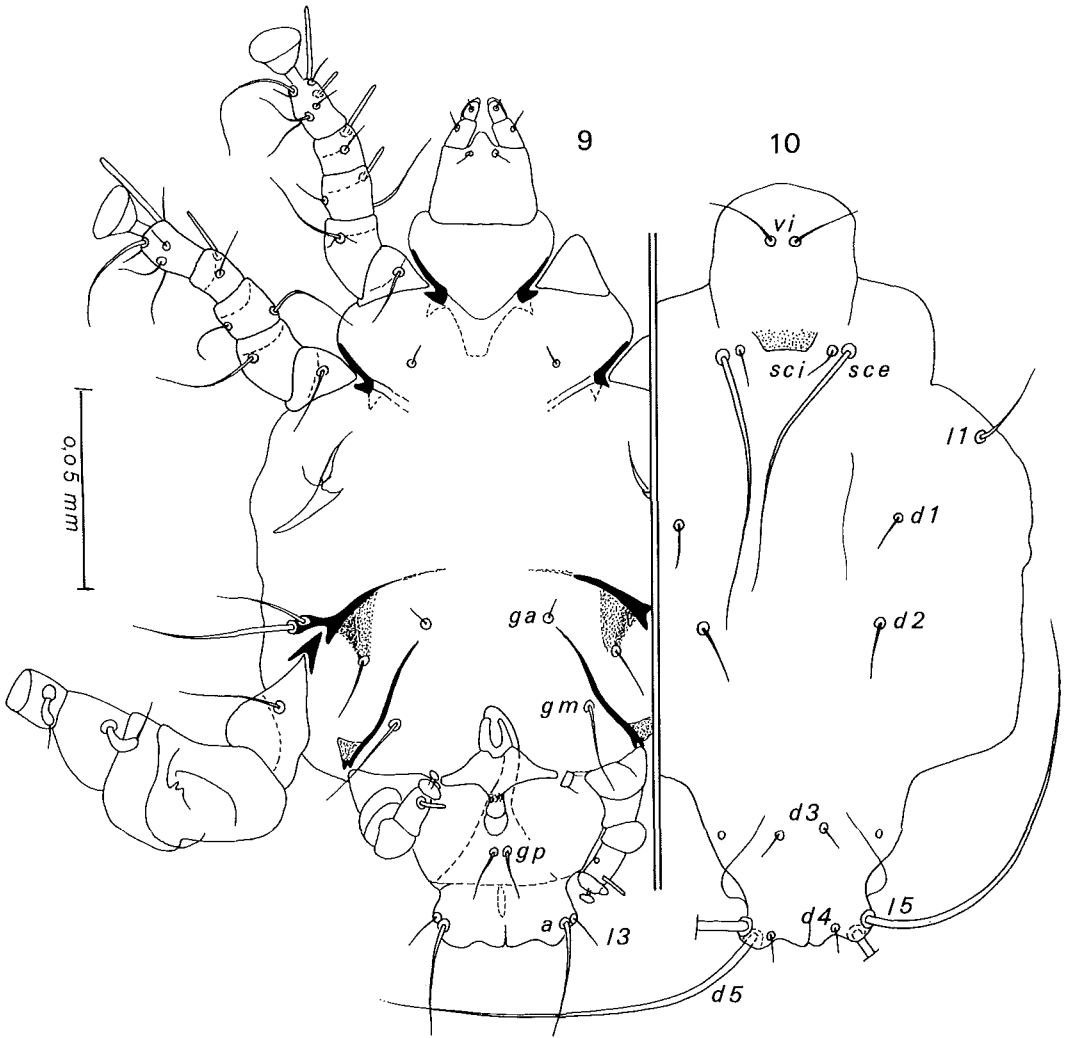
sclerotized. Legs I–II as in female. Legs III very thick. Legs IV very small, with a very short tarsus. Length of setae: *iv* 20; *sce* 66; *sci* 9; *d1* 12; *d2* 18; *d3* 5; *d4* 4; *d5* 125; *ll* 18; *l3* 12; *l5* 150; *a* 33; *ga* 6; *gm* 30; *gp* 15, thin. Setae *l2* and *l4* are absent.

Type specimens

Holotype and seven paratype females and one paratype male from *Peromyscus leucopus*, Juniata Biological Field Station, Huntingdon Co., Pennsylvania, USA,



FIGURES 5-8. *Trichoecius gettingeri* sp. n. Female: 5. In ventrolateral view. 6. In dorsolateral view. 7. Epimeres III in ventrolateral view. 8. Bursa copulatrix.



FIGURES 9, 10. *Trichoecius gettingeri* sp. n. Male: 9. In ventral view. 10. In dorsal view.

2.VII.1981 (Coll. J.O.W. and F.S.L.). Holotype in the U.S. National Museum, Washington, D.C. (No. 4049). Paratypes in collections of the authors.

Remarks

By the regularly striated aspect of the body and the absence of cuticular punctation in the female, this species is closest to *Trichoecius tenax*. It differs by the shorter aspect of epimeres III, the much shorter setae *l1*, *d1* and *d2*, the absence of *l2*, the presence of a sclerotized plate around the copulatory orifice and the dilated aspect of the distal part of the bursa. The male differs from that of *T. tenax* by the absence of striations on the dorsum, the very poor development of epimeres I-II, the smaller size of legs IV, the thicker aspect of the penis, the thinner aspect of the setae *gp*, the shorter

setae *cx I*, *cx III* and several other setae, and by the absence of setae *l2* and *l4*.

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