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Authors: Xu, Yun, and Zhang, Zhi-Qiang

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## ***Tenuipalpus mansonculus* (Acari: Tenuipalpidae) of Australia: redescription of the holotype**

YUN XU<sup>1</sup> & ZHI-QIANG ZHANG<sup>2, 3, 4</sup>

<sup>1</sup> Key Laboratory of Integrated Pest Management for Fujian-Taiwan Crops, Ministry of Agriculture; Fujian Provincial Key Laboratory of Insect Ecology; Fujian Agriculture and Forestry University, Fuzhou 350002, China.

<sup>2</sup> Landcare Research, 231 Morrin Road, Auckland, New Zealand.

<sup>3</sup> Centre for Biodiversity & Biosecurity, School of Biological Sciences, University of Auckland, Auckland, New Zealand

<sup>4</sup> Corresponding author: zhangz@landcareresearch.co.nz

### **Abstract**

The holotype female of *Tenuipalpus mansonculus* Ghai & Shenhmar, 1984 (replacement name of *Colopalpus masoni* Collyer, 1973) is described and illustrated. The nomenclatural history of this species is documented and errors in the original description are corrected.

### **Introduction**

Collyer (1973) described two new species of *Colopalpus*, including *Colopalpus masoni* from leaves of *Pomaderris* sp. imported from Australia. *Colopalpus* was synonymised with *Tenuipalpus* by Meyer (1979). As a result, *T. masoni* (Collyer 1973) became a homonym of *Tenuipalpus masoni* De Leon, 1965, and was later replaced with *Tenuipalpus mansonculus* Ghai & Shenhmar, 1984.

*Tenuipalpus mansonculus* is one of the six species of *Tenuipalpus* known from Australia (Smiley & Gerson 1995; Halliday 1998), but it is the least known species among these six species. Since its original description by Collyer (1973), no further information is available. In a recent study of the Tenuipalpidae from Australasia, we reexamined the holotype of this species. Since the original description by Collyer (1973) is brief and contains some errors, we herein redescribe the holotype to enable correct identification of this species in the future.

The specimen was examined at 1000 times using DIC Nikon E800 microscope. All measurements were made from the slide-mounted specimen using a stage-calibrated ocular ruler and are given in micrometers (µm) (Zhang & Fan 2004). Body length was measured from the anterior margin of the rostral shield to the posterior end of the idiosoma, and the body width was measured as the greatest width between legs I and II. Setae were measured from the centre of setal base to the tip of the seta; distances between setae were measured from the centre of one setal base to that of the other. Legs were measured from the base of the trochanter to the distal end of tarsus (excluding pretarsus). Terminology follows that of Lindquist (1985).

***Tenuipalpus mansonculus* Ghai & Shenhmar, 1984 (Figs. 1–4)**

*Colopalpus masoni* Collyer, 1973: 531, figs. 2–3.

*Tenuipalpus masoni*: Meyer, 1979: 5; Gutierrez & Schicha, 1982: 141.

*Tenuipalpus mansoniculus* Ghai & Shenhmar, 1985: 117; Smiley & Gerson, 1995: 41; Halliday, 1998: 84.

#### *Material examined*

Holotype female. Intercepted in New Zealand quarantine from *Pomaderris* sp. imported from Australia, 29 May, 1970, forwarded by C. A. F. Jaques to D. C. M. Manson. Originally deposited in Collection of Entomology Division, Department of Scientific and Industrial Research, Nelson, New Zealand, and now in New Zealand Arthropod Collection (NZAC), Landcare Research, Auckland, New Zealand.

#### *Redescription of the holotype female*

Gnathosoma. (Figs. 1B, 2) Rostrum reaching middle of femur I, subcapitular setae *m* setiform,  $m=15$ ,  $m-m=15$ . Palp 1-segmented, tarsus with 1 spine-like seta, 18 long.

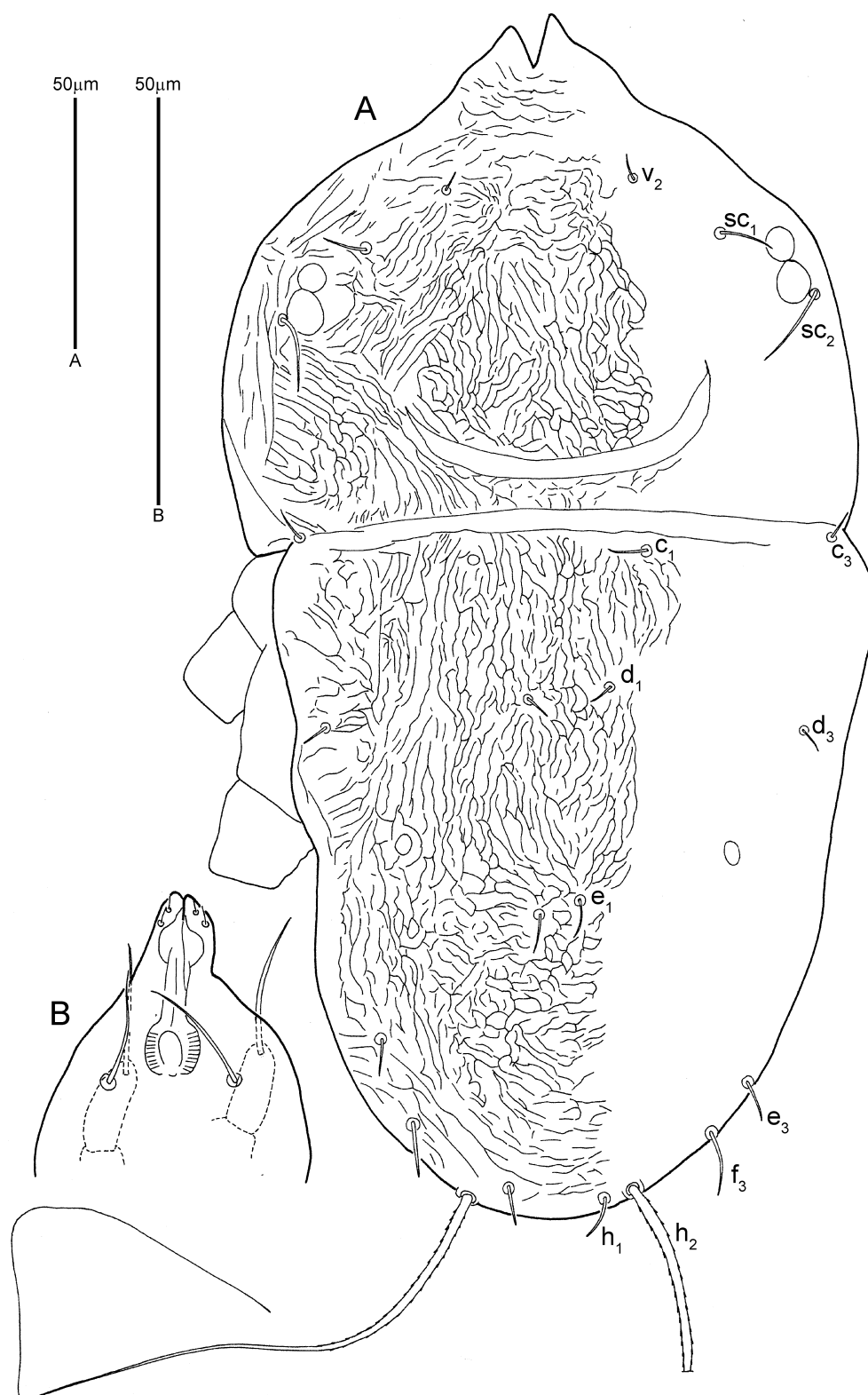
Idiosoma. (Fig. 1A) 245 long, 125 wide. Rostral shield pitted, with 1 median conical projection. PRODORSUM covered with irregular wrinkles mesally and laterally and a transverse sclerotized bar-like basally, bearing 3 pairs of setiform setae ( $v_2$ ,  $sc_1$  and  $sc_2$ ),  $sc_1$  about twice as long as  $v_2$ , and  $sc_2$  about 3 times as long as  $v_2$ ; lengths:  $v_2$  5,  $sc_1$  11,  $sc_2$  15; distances:  $v_2-v_2$  38,  $v_2-sc_1$  21,  $sc_1-sc_1$  73,  $sc_1-sc_2$  23,  $sc_2-sc_2$  110. HYSTEROSOMA covered with irregular wrinkles mesally and laterally; bearing 1 pair of pores, 1 pair of humeral setae ( $c_3$ ), 3 pairs of dorsocentral setae ( $c_1$ ,  $d_1$  and  $e_1$ ), and 5 pairs of dorsolateral setae ( $d_3$ ,  $e_3$ ,  $f_3$ ,  $h_2$  and  $h_1$ ). All setae setiform except flagelliform  $h_2$ . Lengths:  $c_1$  6,  $d_1$  5,  $e_1$  7,  $c_3$  7,  $d_3$  4,  $e_3$  9,  $f_3$  11,  $h_2$  205,  $h_1$  8; distances:  $c_1-c_1$  35,  $d_1-d_1$  16,  $e_1-e_1$  8,  $c_3-c_3$  105,  $d_3-d_3$  95,  $e_3-e_3$  74,  $e_3-f_3$  12,  $f_3-f_3$  60,  $f_3-h_2$  18,  $h_2-h_2$  33,  $h_2-h_1$  9,  $h_1-h_1$  20.

Venter. (Fig. 2) Venter covered with oblique striae between coxae II–IV and transversal striations posterior to setae *1a*; oblique striations between setae *3a–3a* V-shaped; oblique striations between *3a* and *4a* also V-shaped. All coxal setae setiform. Setae *1a* flagelliform, middle medioventral setae *3a* and posterior medioventral setae *4a* setiform. Setae *3a* and *4a* subequal in length, *1a* longest, about 5 times as long as *3a*. Lengths: *1a* 96, *1b* 20, *1c* 14, *2b* 20, *2c* 17, *3a* 18, *3b* 17, *4a* 20, *4b* 18. Distances: *1a–1a* 26, *3a–3a* 41, *4a–4a* 31. Genital and ventral area with transversal striae mesally and oblique laterally as shown in Fig. 2, bearing 1 pair of aggenital setae (*ag*) and 2 pairs of genital setae ( $g_1$  and  $g_2$ ), setiform. Anal area with 2 pairs of pseudanal setae ( $ps_1$  and  $ps_2$ ),  $ps_1$  about twice as long as  $ps_2$ . Setae lengths: *ag* 14,  $g_1$  19,  $g_2$  16,  $ps_1$  20,  $ps_2$  11. Distances: *ag–ag* 16,  $g_1-g_1$  11,  $g_1-g_2$  8,  $g_2-g_2$  23,  $ps_1-ps_2$  6.

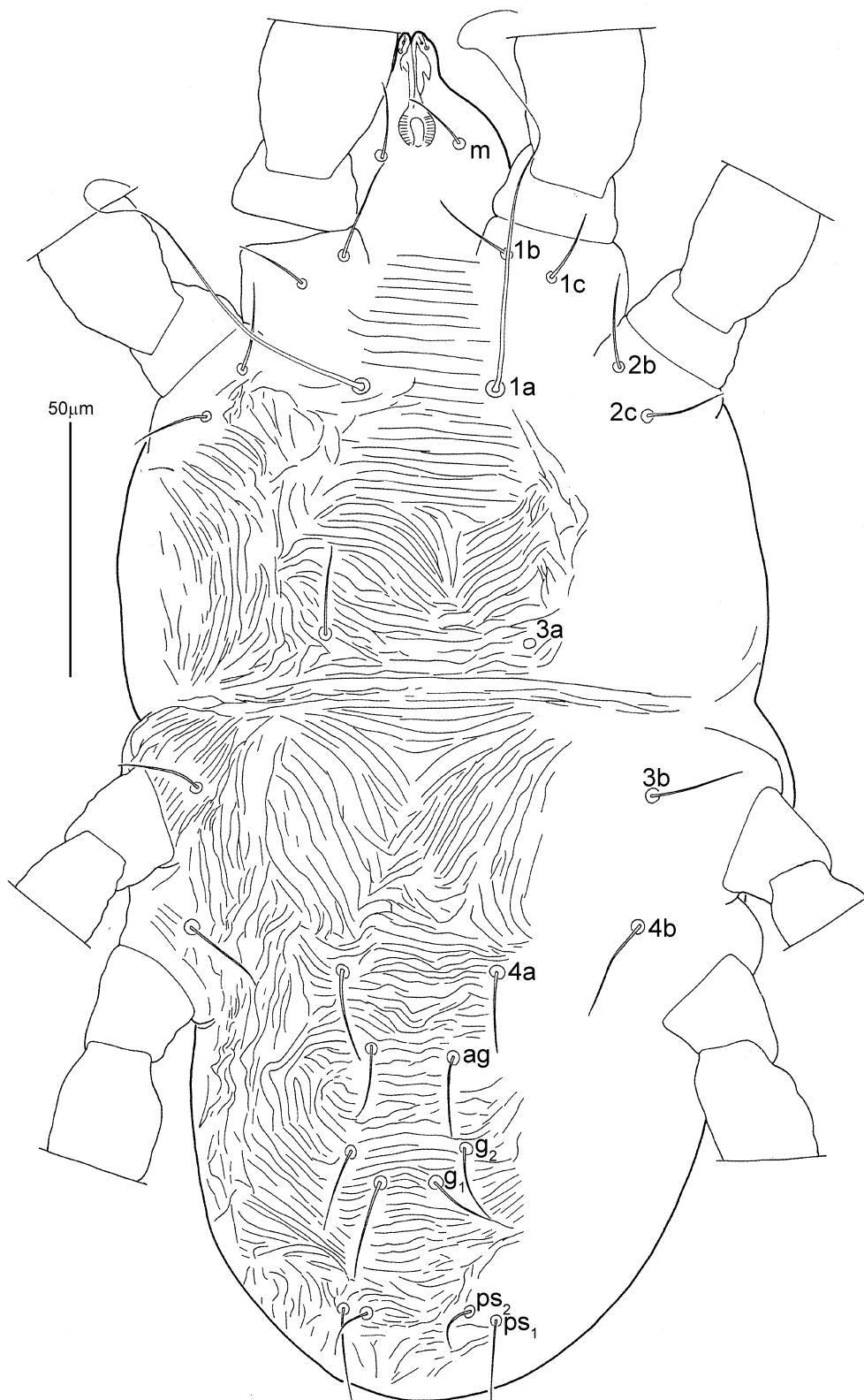
Legs. (Figs. 3–4) Lengths of legs I–IV: 115, 100, 92, 105. Chaetotaxy: coxae 2-2-1-1; trochanters 1-1-1-1; femora 4-4-2-1; genua 3-3-1-1; tibiae 5-5-3-3; tarsus 8+ $\omega$ -8+ $\omega$ -5-5. Most dorsal and lateral setae on trochanters, femora, genua and tibiae barbed, lateral setae *l'* and *l''* on femura I–II, genu I and tibiae I–II spine-like; ventral setae  $v'$ ,  $ev'$  and  $bv''$  on trochanters and femora setiform, setae  $v'$  and  $v''$  on tibiae I–IV pectinate; Setae *ft'* on tarsi I–IV flagelliform, *ft''* barbed; ungual setae *u'* and *u''* pectinate and equal in length; tectal seta *tc'* and *tc''* on tarsus I–IV spine-like. Solenidion  $\omega''$  and eupathidium  $p'\zeta$  and  $p''\zeta$  on tarsi I–II rod-like. Lengths of solenidia: I  $\omega''$  7, II  $\omega''$  7. Claws and empodium reduced, pad-like, each with tenent hairs on each side.

#### *Remarks*

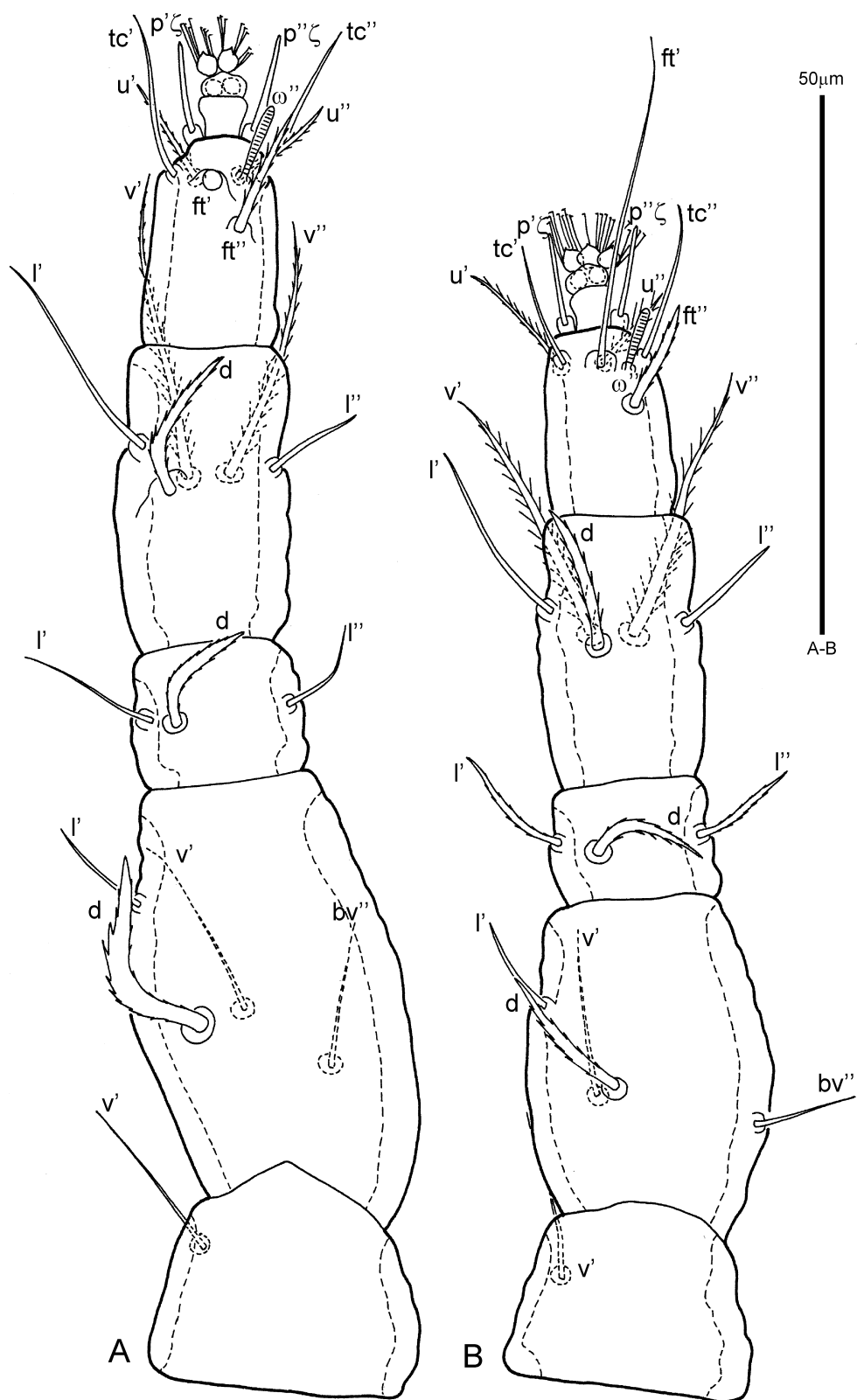
Collyer (1973) reported that only tarsus II in the female has a solenidion, but actually tarsi I and II each bears a solenidion. Collyer (1973) also mentioned four paratype females and two paratype males (three females sent to other institutions), but now only the holotype is preserved in NZAC. Collyer (1973) noted that males are similar to females but lack “the sclerotized bar” in the propodosomal area and smaller than females. She observed a solenidion each on tarsi I and II in males—this agrees with the pattern in the holotype female.



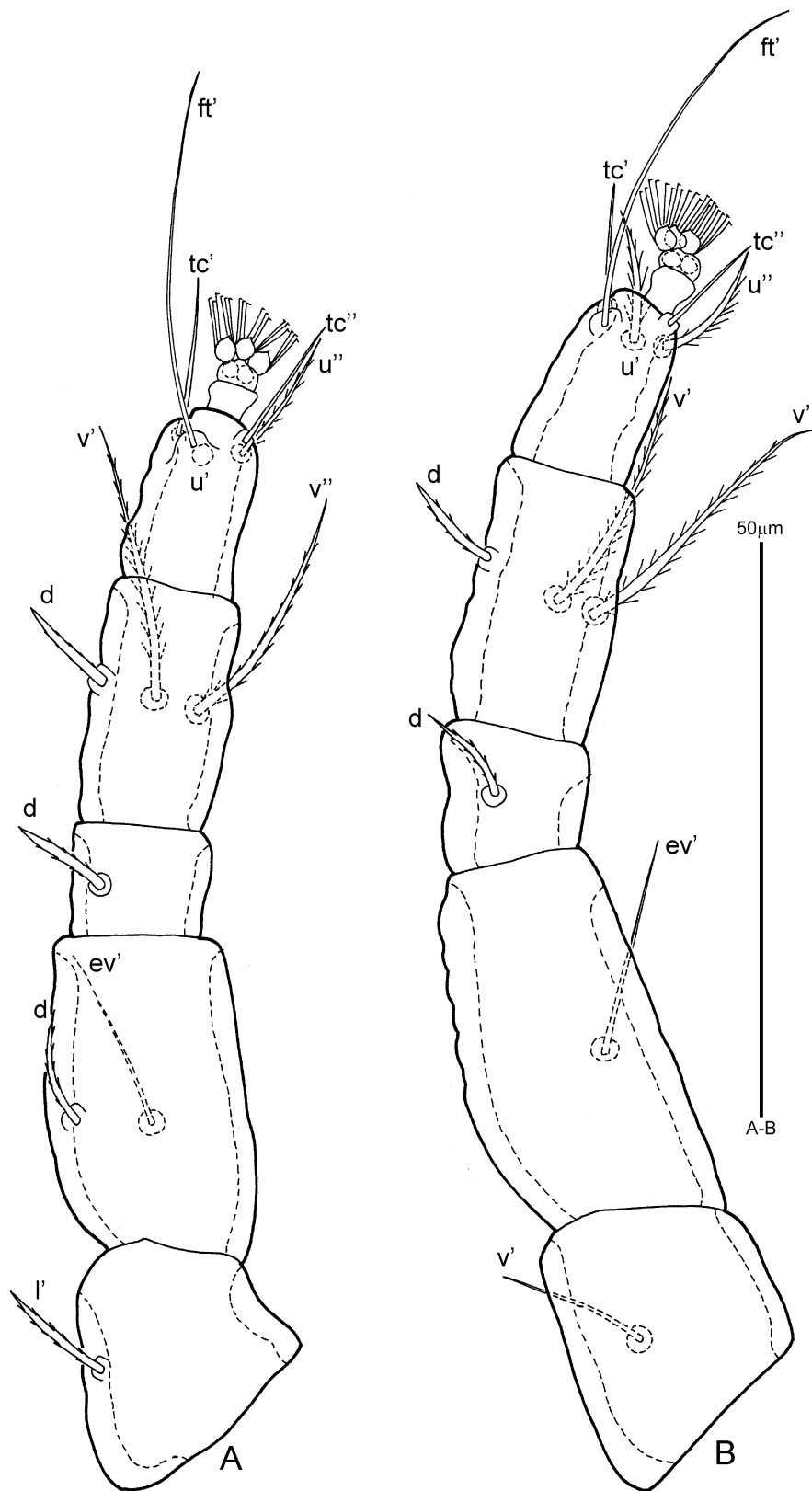
**FIGURE 1.** *Tenuipalpus mansonculus* Ghai & Shenhmar (female). A, dorsal view of idiosoma; B, subcapitulum.



**FIGURE 2.** *Tenuipalpus mansonicus* Ghai & Shenhmar (female). Ventral view of idiosoma.



**FIGURE 3.** *Tenuipalpus mansonculus* Ghai & Shenhmar (female). A, leg I; B, leg II.



**FIGURE 4.** *Tenuipalpus mansonculus* Ghai & Shenhmar (female). A, leg III; B, leg IV.

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