

TWO NEW SPECIES OF THE FEATHER MITE GENUS *AMERODECTES* VALIM ET HERNANDES, 2010 (ACARIFORMES: PROCTOPHYLLODIDAE) FROM PASSERINES (AVES: PASSERIFORMES) OF THE NEW WORLD

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ABSTRACT: Two new species of the feather mite genus *Amerodectes* Valim et Hernandez, 2010 (Proctophylloidae: Pterodectinae) are described from passerines of the New World: *Amerodectes tiaris* sp. n. from the Yellow-faced Grassquit *Tiaris olivaceus* (Thraupidae) from Cuba and *A. zonotrichiae* sp. n. from the Rufous-collared Sparrow *Zonotrichia capensis* (Emberizidae) from Chile. A brief review of taxonomic works dealing with the *Pterodectes* generic complex is provided.

KEY WORDS: Feather mites, Acariformes, Proctophylloidae, *Amerodectes*, systematics, Passeriformes

INTRODUCTION

The feather mite genus *Amerodectes* Valim et Hernandez, 2010 (Analgoidea: Proctophylloidae: Pterodectinae) was established over the course of taxonomic revisions of the genus *Pterodectes* Robin, 1877 (*sensu* Park and Atyeo 1971) and extensive investigations of biodiversity of pterodectines in South America (Mironov et al. 2008; Hernandez and Valim 2005, 2006; Valim and Hernandez 2006, 2008, 2009, 2010; Mironov and González-Acuña 2011; Hernandez 2013).

The genus *Amerodectes* and six more genera *Berladectes* Valim et Hernandez, 2009, *Cotingodectes* Valim et Hernandez, 2009, *Hemitriccodectes* Hernandez, 2013, *Metapterodectes* Mironov, 2008, *Tyrannidectes* Mironov, 2008 and *Pterodectes* — constitute the *Pterodectes* generic complex within the subfamily Pterodectinae. With the exception of the monotypic genus *Pterodectes*, which is associated with globally distributed species of swallows (Hirundinidae), mites of the remaining genera of this complex live on various oscine and suboscine passerines of the New World (Mironov 2009; Valim and Hernandez 2010; Mironov and González-Acuña 2011). As for most pterodectines, representatives of this genus occupy the primaries, secondaries and retrices of the plumage of their avian hosts, where they are located in corridors formed by barbs on the ventral side of vanes.

The genus *Amerodectes* is the most species-rich genus in the *Pterodectes* complex and includes 23 previously described species (Valim and Hernandez 2010; Mironov and González-Acuña 2011; Mironov and OConnor 2014). The majority of previously known species (19) are associated with oscines of the infraorder Passerida; among

them, 14 species were described from birds of the superfamily Passeroidea, three from the Turdidae, one from the Mimidae (Muscicapoidea), and one from the Troglodytidae (Certhioidea). Only four species are known so far from suboscines: one species from the Furnariidae and three from the Tyrannidae. Modern (re)descriptions of all previously known *Amerodectes* species are provided in the following taxonomic works: OConnor et al. (2005), Mironov et al. (2008), Valim and Hernandez (2006, 2008, 2010), Mironov and González-Acuña (2011), Mironov and OConnor (2014). The publication by Valim and Hernandez (2010) contains a review of host associations of *Amerodectes* species, and the paper by Mironov and González-Acuña (2011) provides a key to all previously known species; both publications give exhaustive references to investigations of pterodectines in the New World.

The present paper continues our study of feather mites associated with passerines of South and Central America (Mironov and González-Acuña 2009, 2011, 2013) and provides descriptions of two new species of the genus *Amerodectes* found on passerine hosts of the families Emberizidae and Thraupidae.

MATERIAL AND METHODS

The material used in the present work was collected by DGA in Cuba in 2007 and in Chile in 2010. Examined bird specimens represented individuals that died of a disease or were road-killed. Feather mites were removed from the plumage of their hosts using a needle or fine forceps and placed in tubes with 70% ethanol. Mite specimens were mounted on microslides in Faure medium

according to the standard technique used for small mites (Krantz and Walter 2009). The descriptions of new taxa are given in the format elaborated for pterodectine mites over in the past ten years (Mironov and Fain 2003; Hernandez and Valim 2006; Mironov 2006, 2008; Valim and Hernandez 2010; Mironov and González-Acuña 2011). General morphological terms and the leg chaetotaxy are after Gaud and Atyeo (1996); the idiosomal chaetotaxy also follows these authors with subsequent correction of coxal setal nomenclature by Norton (1998). All measurements are in micrometers (μm). Measuring techniques used for particular structures are as described by Mironov and González-Acuña (2011). The classification and scientific names of birds follow Clements et al (2013). Type material depositories: DGA — Departamento de Ciencias Pecuarias, Facultad de Ciencias Veterinarias, Universidad de Concepción (Chillán, Chile), ZISP — Zoological Institute of the Russian Academy of Sciences (Saint-Petersburg, Russia).

SYSTEMATICS

Family Proctophyllodidae Mégnin et Trouessart, 1884

Subfamily Pterodectinae Park et Atyeo, 1971

Genus *Amerodectes* Valim et Hernandez, 2010

Amerodectes zonorichiae sp. n.

Figs 1–3

Type material. Male holotype (ZISP 6013), 2 male and 6 female paratypes from the Rufous-collared Sparrow *Zonorichia capensis* (Statius Müller, PL, 1776) (Passeriformes: Emberizidae), CHILE, Atacama Region, Llanos de Challe National Park, 28°10'0"S 71°0'0"W, 20 August 2010, coll. D.A. González-Acuña. Holotype, 1 male and 3 female paratypes — ZISP, 1 male and 3 female paratypes — DGA.

Additional material. 6 females from the same host, CHILE, Coquimbo Region, Fray Jorge National Park, 30°39'57"S, 71°39'57"W, 10 December 2010, coll. D.A. González-Acuña.

Description. Male (holotype, range for 2 paratypes in parentheses). Idiosoma, length \times width, 360 (360–375) \times 153 (150–160), length of hysterosoma 235 (230–245). Prodorsal shield: entire, antero-lateral extensions with two unequal indentations, lateral margins without noticeable concavities, posterior margin straight, posterior angles widely rounded, length 113 (110–120), width 105 (105–115), surface with small ovate la-

cunae in anterior one third (Fig. 1A); scapular setae *se* separated by 56 (55–60). Setae *ve* rudimentary, represented by alveoli. Scapular shields not developed dorsally. Humeral shields absent. Setae *cp* and *c2* situated on striated tegument. Subhumeral setae *c3* lanceolate, 19 (19–22) \times 6 (6–8). Hysteronotal shield: greatest length 236 (235–255), width in anterior part 102 (100–110), anterior margin straight, surface without ornamentation or posterior one third bearing scarcely distinct, small lacunae. Distance between prodorsal and hysteronotal shields about 10. Opisthosomal lobes approximately as long as wide at base; posterior margins of lobes roughly rounded, with scarcely expressed extensions at bases of setae *h2* and *h3*. Terminal cleft shaped as an inverted V with rounded anterior end, 31 (30–35) in length. Supranal concavity semicircular, well outlined. Setae *f2* anterior to bases of setae *ps2*. Setae *h1* at level of anterior end of supranal concavity. Setae *h3* whip-like, 75 (75–80) in length; setae *ps2* 80 (80–85) long; setae *ps1* filiform, about 10 long, situated on margin of terminal cleft approximately at level of setae *ps2*. Distances between bases of dorsal setae: *c2:d2* 93 (90–95), *d2:e2* 90 (85–90), *e2:h3* 50 (50–60), *d1:d2* 45 (40–45), *e1:e2* 15 (15–20), *h1:ps2* 16 (15–22), *h2:h2* 50 (50–60), *h3:h3* 36 (35–40), *ps2:ps2* 64 (60–65).

Epimerites I fused into a V, fused part trifurcate (with one median and a pair of lateral short indentations) (Fig. 1B). Coxal fields I, II without extensively sclerotized areas. Rudimentary sclerites rEpIIa absent. Coxal fields I–III open. Coxal fields IV without sclerotized areas at bases of trochanters IV. Epimerites IVa absent. Genital arch of moderate size, 22 (22–26) \times 42 (40–44); basal sclerite of genital apparatus with widely rounded posterior margin; aedeagus sword-shaped, 98 (95–105) long, extending to midlevel of anal suckers (Fig. 3E). Genital papillae connected at bases. Genital and adanal shields absent. Anal suckers 11 (11–12) in diameter, corolla smooth, surrounding membrane with radial striae. Opisthoventral shields narrow, occupying lateral areas of opisthosoma and distal half of opisthosomal lobes; inner margins of these shields at level of anal suckers smooth, bearings setae *ps3*. Setae *4b* situated posterior to level of setae *3a*. Distance between ventral setae: *4b:3a* 7 (7–9), *3a:4a* 36 (35–42), *4a:g* 35 (35–48), *g:ps3* 60 (55–60), *ps3:ps3* 68 (65–70), *ps3:h3* 35 (33–35).

Femora I, II with narrow ventral crests, other segments of legs I, II without processes.

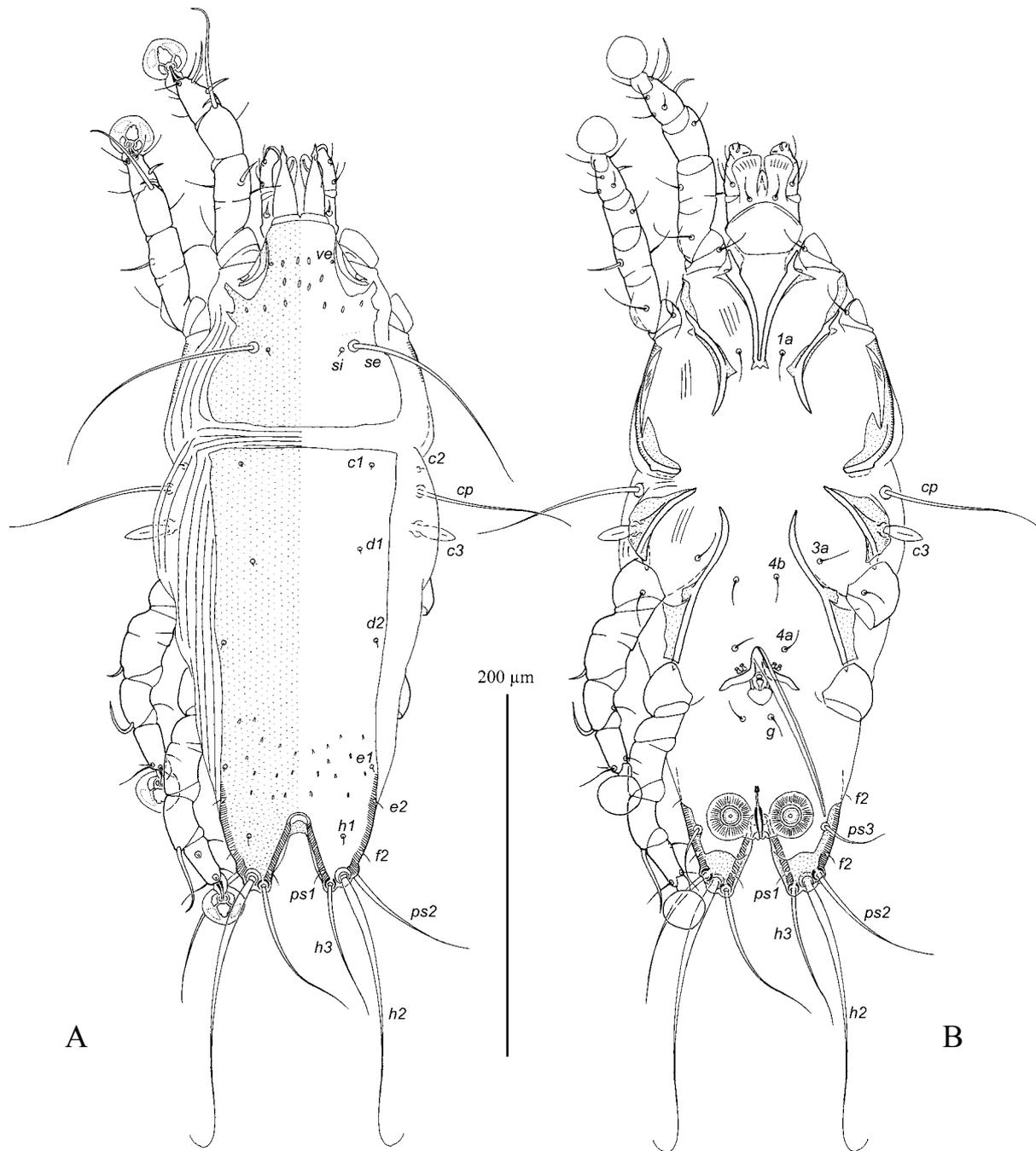


Fig. 1. *Amerodectes zonotrichiae* sp. n., male. A — dorsal view, B — ventral view.

Solenidion σI of genu I 12 (12–13) long, situated at midlevel of segment; genual setae c_{GI} , II and mG I filiform, setae mG II thickened, thin spiculiform (Figs 3A, B). Seta d of tarsi II subequal to corresponding setae f , setae d of tarsi III much shorter than corresponding setae f (Fig. 3C). Solenidion ϕ of tibia IV extending to midlevel of ambulacral disc. Tarsus IV 28 (26–28) long, without apical process; seta d in basal half of segment (Fig. 3D). Length of solenidia: ω II 13 (13–14), ω III 11 (10–12), ϕ I 58 (55–60), ϕ II 47 (45–50), ϕ III 28 (25–30), ϕ IV 33 (32–35).

Female (range for 4 paratypes). Idiosoma, length \times width, 545–560 \times 175–190, length of hysterosoma 385–400. Prodorsal shield: outlines and surface as in male, 135–140 \times 140–145, posterior angles acute, setae se separated by 70–78 (Fig. 2A). Setae ve present, rudimentary. Scapular shields narrow, not developed dorsally. Humeral shields rudimentary, represented by poorly sclerotized bands anterior to bases of setae cp . Setae cp and $c2$ situated on striated tegument. Setae $c3$ lanceolate, 22–24 \times 8–9. Anterior and lobar parts of hysteronotal shield separated dorsally by narrow

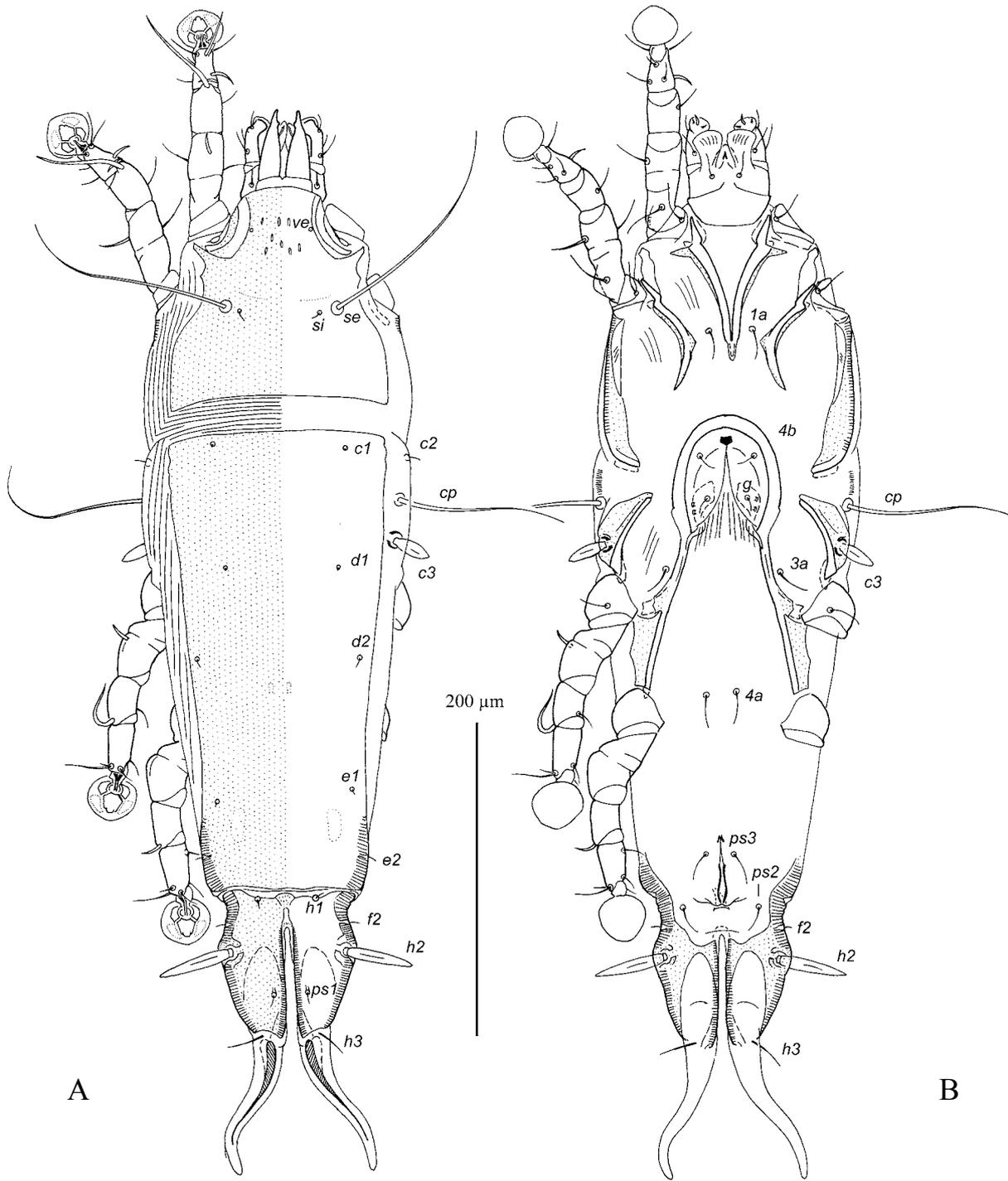


Fig. 2. *Amerodectes zonotrichiae* sp. n., female. A — dorsal view, B — ventral view.

transverse band of soft tegument, but remain connected ventro-laterally (Fig. 2B). Anterior hysteronotal shield slightly attenuate posteriorly, anterior margin straight, greatest length 290–305, width at anterior margin 140–150, surface with ornamentation. Length of lobar region 100–105, greatest width 80–90. Terminal cleft narrow, parallel-sided, 75–80 long. Supranal concavity indistinct; lobar shield with narrow posterior incision almost

splitting this shield into two parts, surface of shield without ornamentation. Setae *h1* on anterior margin of lobar shield; setae *h1* and *f2* arranged in a trapezium. Setae *h2* spindle-like, 42–48 × 8–9. Setae *ps1* near inner margins of opisthosomal lobes, approximately equidistant from levels of setae *h2* and *h3*. Setae *h3* 18–22 long, about 1/5 the length of terminal appendages. Distances between dorsal setae: *c2*:*d2* 130–140, *d2*:*e2* 125–135, *e2*:*h2* 60–

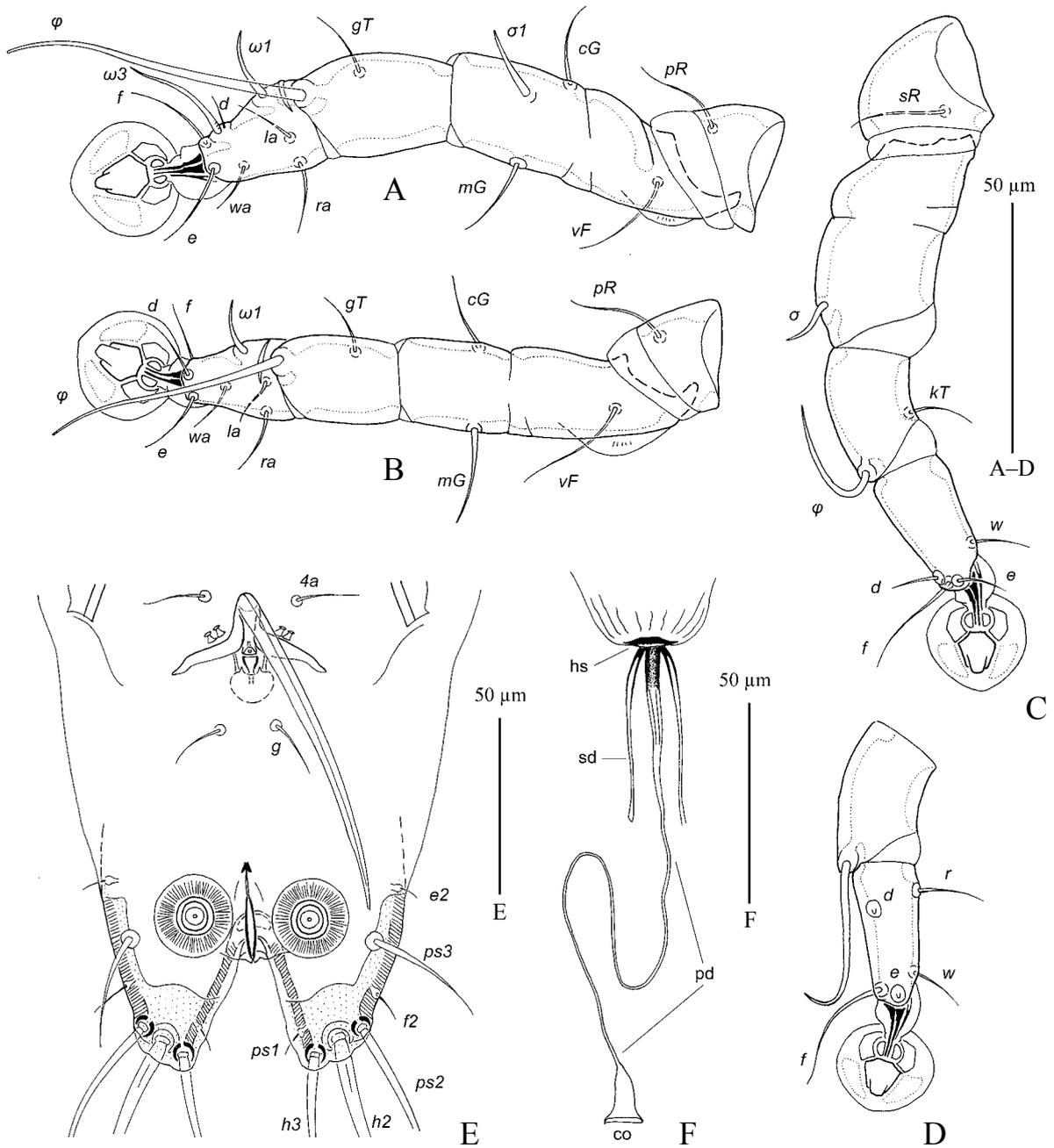


Fig. 3. *Amerodectes zonotrichiae* sp. n., details. A–C — legs I–III of male, respectively, D — tibia and tarsus IV of male, E — opisthosoma of male, ventral view, F — spermatheca and spermaducts. co — copulatory opening, hs — head of spermatheca, pd — primary spermaduct, sd — secondary spermaduct.

65, $h2:h3$ 50–60, $d1:d2$ 55–60, $e1:e2$ 40–45, $h1:h2$ 30–35, $h1:h1$ 35–40, $h2:h2$ 70–80, $h2:ps1$ 22–33.

Epimerites I fused into a Y, with very short and narrow stem, without lateral extensions. Lateral parts of coxal fields II without large sclerotized areas (Fig. 2B). Epimerites IVa absent. Translobar apodemes of opisthosomal lobes present, wide, not fused to each other anterior to termi-

nal cleft. Epigynum without lateral extensions, greatest width 70–75; apodemes of ovipore fused with epimerites IIIa. Primary spermaduct with enlargement in proximal quarter; secondary spermaducts 40–45 long (Fig. 3F). Pseudanal setae fili-form, setae $ps2$ posterior to anal opening and widely separated from each other, distance between setae: $ps2:ps2$ 45–50, $ps3:ps3$ 15–17, $ps2:ps3$ 28–35.

Femora II with ventral crest, other segments of legs I, II without processes. Solenidion $\sigma 1$ of genu I short, 13–14 long, situated at midlevel of segment. Genua I, II as in male. Seta d and f of tarsi II subequal, setae d of tarsi III, IV much shorter than corresponding setae f . Genu IV dorsally inflated, with narrow dorsal crest. Lengths of solenidia: $\omega 1$ I 13–15, $\omega 1$ II 11–12, ϕ I 60–65, ϕ II 48–58, ϕ III 24–26, ϕ IV 10–12.

Differential diagnosis. The new species, *Amerodectes zonotrichiae* sp. n., belongs to a group of *Amerodectes* species with long filiform setae $h3$ in males. Among these, it is very close to *A. phrygilus* Mironov et González-Acuña, 2011 from *Phrygilus patagonicus* Lowe in having the following features: in both sexes, the prodorsal and hysteronotal shields are without pronounced lacunae, the anterior margin of the hysteronotal shield is straight; in males, the aedeagus extends to the level of anal suckers, the humeral shields are absent; in females, the humeral shields are strongly reduced and the terminal cleft is longer than the half the length of the lobar region.

Amerodectes zonotrichiae differs from *A. phrygilus* by the following characters: in both sexes, the antero-lateral extensions of the prodorsal shield bear two unequal indentations; in males, setae $ps3$ are situated at the level of posterior margins of anal suckers, the posterior angles of the prodorsal shield are widely rounded; in females, the parts of lobar shields are connected by a narrow transverse bridge, setae $ps1$ are approximately equidistant from the levels of setae $h2$ and $h3$. In both sexes of *A. phrygilus*, the antero-lateral extensions of the prodorsal shield are acute; in males, setae $ps3$ are situated at the midlevel of anal suckers, and the posterior angles of the prodorsal shield are acute; in females, the lateral parts of lobar shield are widely connected, setae $ps1$ are closer the levels of setae $h3$ than of setae $h2$.

Females of *A. zonotrichiae* also resemble those of *A. sicalis* Mironov et González-Acuña, 2011 from *Sicalis luteola* (Sparman) by having a very narrow transverse bridge connecting lateral parts of the lobar shield. However, females of *A. zonotrichiae* differ from that species by having a much longer secondary spermathecae (40–45 versus 20–25 in *A. sicalis*). Males of these two species are distinctly different: in *A. zonotrichiae*, the aedeagus extends only to the midlevel of the anal suckers, while in *A. sicalis* it is noticeably longer and extends to the anterior end of the terminal cleft.

Etymology. The specific epithet derives from the generic name of the type host and is a noun in the genitive case.

***Amerodectes tiaris* sp. n.**

Figs 4–6

Type material. Male holotype (ZISP 6021), 5 male and 4 female paratypes from the Yellow-faced Grassquit *Tiaris olivaceus* (Linnaeus, 1766) (Passeriformes: Thraupidae), CUBA, Habana, 23° 6'52"N, 82°23'1"W, 21 September 2007, coll. D.A. González-Acuña. Holotype, 3 male and 2 female paratypes — ZISP, 2 male and 2 female paratypes — DGA.

Description. Male (holotype, range for 5 paratypes in parentheses). Idiosoma, length \times width, 340 (330–345) \times 130 (130–145), length of hysterosoma 225 (210–230). Prodorsal shield: entire, antero-lateral extensions short and rounded terminally, lateral margins shallowly concave, posterior margin straight, length 124 (124–135), width 100 (100–110), surface with numerous small circular lacunae (Fig. 4A); scapular setae se separated by 56 (55–60). Setae ve present, minute. Scapular shields narrow, not developed dorsally. Humeral shields absent. Setae cp and $c2$ situated on soft tegument. Subhumeral setae $c3$ lanceolate, 18 (18–20) \times 8 (8–9). Hysteronotal shield: greatest length 225 (220–230), width in anterior part 100 (100–110), anterior margin straight or slightly convex, entire surface except for lobes with numerous circular lacunae as on prodorsal shield. Distance between prodorsal and hysteronotal shields about 10. Opisthosomal lobes approximately as long as wide at base; posterior margins of lobes roughly rounded, with scarcely marked extensions at bases of setae $h2$ and $h3$. Terminal cleft shaped as an inverted U with slightly divergent branches, 30 (24–30) in length. Supranal concavity present, well outlined. Setae $f2$ anterior to bases of setae $ps2$. Setae $h1$ at level of anterior end of terminal cleft. Setae $h3$ whip-like, 70 (70–75) long; setae $ps2$ 70 (70–80) long; setae $ps1$ filiform, about 10 long, situated on margin of terminal cleft approximately at level of setae $ps2$. Distances between bases of dorsal setae: $c2:d2$ 82 (80–85), $d2:e2$ 85 (85–90), $e2:h3$ 48 (45–50), $d1:d2$ 40 (30–40), $e1:e2$ 24 (22–25), $h1:ps2$ 20 (20–25), $h2:h2$ 50 (45–50), $h3:h3$ 38 (33–40), $ps2:ps2$ 62 (60–65).

Epimerites I fused into a V, fused part with pair of acute extensions directed to epimerites II but not fused with them (Fig. 4B). Coxal fields I,

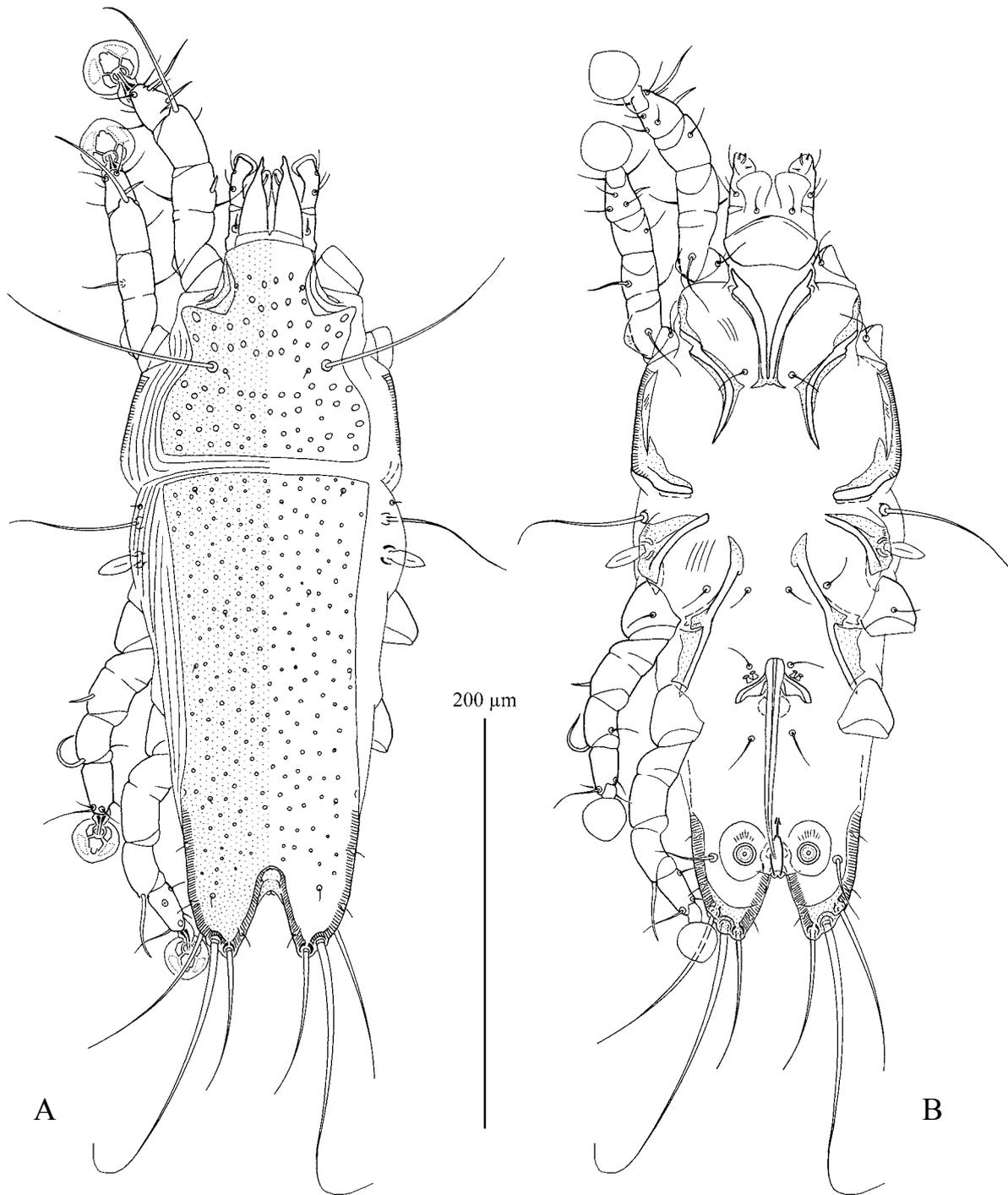


Fig. 4. *Amerodectes tiaris* sp. n., male. A — dorsal view, B — ventral view.

II without extensive sclerotized areas. Rudimentary sclerites rEpIIa absent. Coxal fields I–III open. Coxal fields IV without sclerotized areas at bases of trochanters IV. Epimerites IVa absent. Genital arch of moderate size, 24 (22–25) × 38 (35–40); basal sclerite of genital apparatus widely rounded posteriorly; aedeagus sword-shaped, 105 (100–110) long, extending to midlevel of anal suckers (Fig. 6E). Genital papillae connected at

bases. Genital and adanal shields absent. Anal suckers 11 (9–11) in diameter, corolla smooth, surrounding membrane with several radial striae in anterior part. Opisthoventral shields wide, occupying lateral areas of opisthosoma and distal half of opisthosomal lobes. Setae *ps3* situated off opisthoventral shields, approximately at midlevel of anal suckers. Setae *3a* and *4b* situated at same transverse level. Distance between ventral setae:

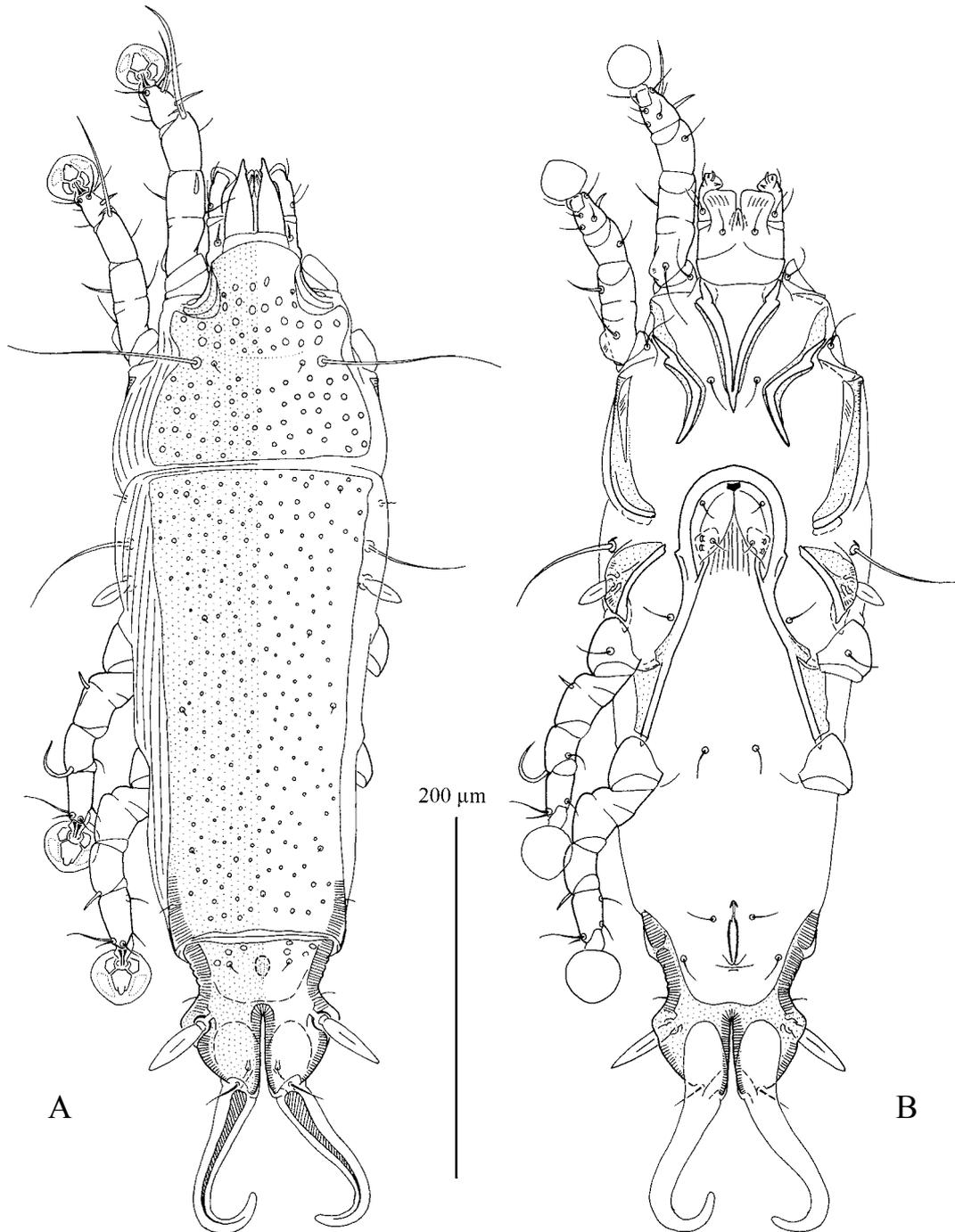


Fig. 5. *Amerodectes tiaris* sp. n., female. A — dorsal view, B — ventral view.

4b:4a 39 (35–40), *4a:g* 35 (35–38), *g:ps3* 60 (55–60), *ps3:ps3* 62 (55–65), *ps3:h3* 36 (35–38).

Femora I, II with narrow ventral crests, other segments of legs I, II without processes. Solenidion σI of genu I 9 (9–10) long, situated in basal half of segment; genual setae *cGI*, II and *mGI* filiform, setae *mGII* thickened, spiculiform (Figs 6A, B). Setae *d* and *f* of tarsi II subequal in length, setae *d* of tarsi III much shorter than correspond-

ing setae *f* (Fig. 6C). Solenidion ϕ of tibia IV extending to midlevel of ambulacral disc. Tarsus IV 24 (24–28) long, without apical process; seta *d* in basal half of segment (Fig. 6D). Length of solenidia: ωII 15 (12–15), ωIII 9 (9–11), ϕI 62 (60–65), ϕII 47 (45–50), ϕIII 18 (18–22), ϕIV 24 (24–26).

Female (range for 4 paratypes). Idiosoma, length \times width, 465–480 \times 150–160, length of

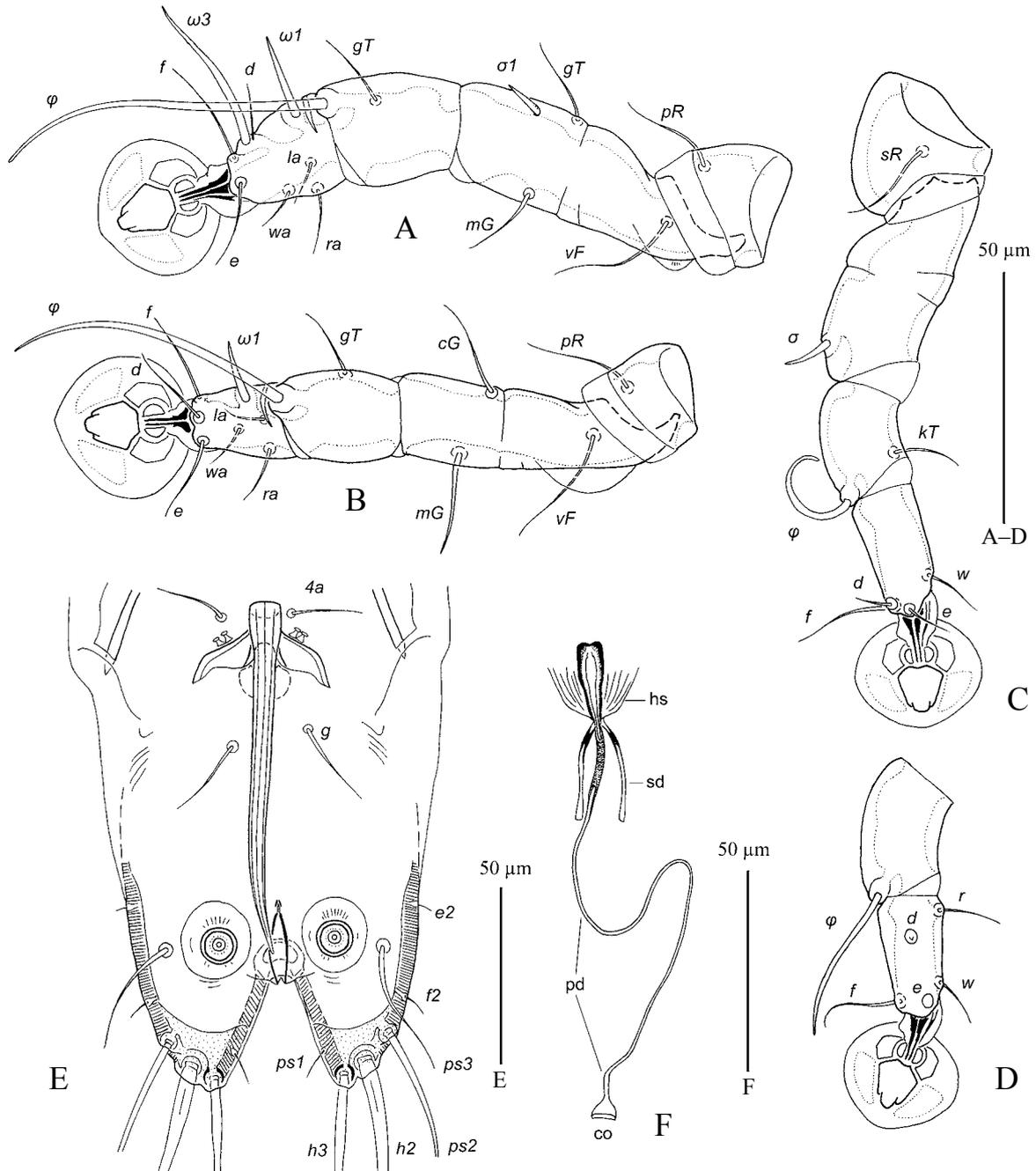


Fig. 6. *Amerodectes tiaris* sp. n., details. A–C — legs I–III of male, respectively, D — tibia and tarsus IV of male, E — opisthosoma of male, ventral view, F — spermatheca and spermaducts. co — copulatory opening, hs — head of spermatheca, pd — primary spermaduct, sd — secondary spermaduct.

hysterosoma 320–340. Prodorsal shield: outline and surface as in male, 124–130 × 120–122, setae *se* separated by 70–75 (Fig. 5A). Setae *ve* present, minute. Scapular shields narrow, not developed dorsally. Humeral shields absent. Setae *cp* and *c2* situated on soft tegument. Setae *c3* lanceolate, 20–22 × 8–9. Anterior and lobar parts of hysteronotal shield separated dorsally by narrow transverse band of soft tegument, but remain

connected ventro-laterally (Fig. 5B). Anterior hysteronotal shield almost rectangular, anterior margin straight or slightly convex, greatest length 250–265, width at anterior margin 120–125, whole surface with numerous small circular lacunae as on prodorsal shield. Length of lobar region 85–90, greatest width 83–88. Terminal cleft narrow, parallel-sided, lateral margins almost touching, anterior end extending slightly beyond

level of setae *h2*, 45–50 long. Supranal concavity well outlined, ovate; surface of lobar shield with several ovate lacunae near anterior margin. Setae *h1* on lobar shield, distant from anterior margins and situated at level of supranal concavity; setae *h1* and *f2* arranged in trapezium. Setae *h2* spindle-like, 33–38 × 9–10. Setae *ps1* situated near inner margins of opisthosomal lobes, much closer to level of setae *h3* than *h2*. Setae *h3* 18–22 long, about 1/5 of terminal appendages. Distances between dorsal setae: *c2:d2* 100–115, *d2:e2* 100–110, *e2:h2* 65–70, *h2:h3* 35–36, *d1:d2* 45–50, *e1:e2* 25–30, *h1:h2* 30–33, *h1:h1* 33–35, *h2:h2* 68–75, *h2:ps1* 25–30.

Epimerites I fused into a Y with very short and narrow stem. Lateral parts of coxal fields II without large sclerotized areas (Fig. 5B). Epimerites IVa absent. Translobar apodemes of opisthosomal lobes present, wide, fused to each other anterior to terminal cleft. Epigynum with small lateral ledges, greatest width 58–60; apodemes of ovipore fused with epimerites IIIa. Primary spermatiduct slightly enlarged in very proximal part; secondary spermatiducts 20–25 long (Fig. 6F). Pseudanal setae filiform; setae *ps2* posterior to anal opening and widely separated from each other; distance between setae: *ps2:ps2* 48–53, *ps3:ps3* 20–25, *ps2:ps3* 22–25.

Femora I, II with ventral crests, other segments of legs I, II without processes. Solenidion *σ1* of genu I short 9–11 long, situated at midlevel of segment. Genua setae *cGI*, II, *mG* I, filiform and setae *mG* II thickened, spiculiform (Figs 6A, B). Setae *d* and *f* of tarsi II subequal in length, setae *d* of tarsi III, IV half as long as corresponding setae *f*. Genu IV dorsally inflated, with narrow longitudinal dorsal crest. Lengths of solenidia: *ω1I* 14–15, *ω1II* 11–13, *φI* 64–70, *φII* 48–53, *φIII* 20–22, *φIV* 11–12.

Differential diagnosis. Like the other new species described in this paper, *Amerodectes tiaris* sp. n. belongs to a species-group having filiform setae *h3* in males and is relatively close to *A. phrygillus* Mironov et González-Acuña, 2011 in having an aedeagus that extends to the level of anal suckers in males and the humeral shields strongly reduced or completely lost in both sexes. *Amerodectes tiaris* clearly differs from *A. phrygillus* and also from *A. zonotrichiae* by the following features: in both sexes, the prodorsal and hysteronotal shields are entirely covered with numerous circular lacunae; in males, the fused part of epimerites I has a pair of laterally directed acute extensions, setae *3a* and *4b*

are arranged in an almost transverse row, and setae *ps3* are situated off the opisthoventral shields; in females, the terminal cleft is short and approximately half as long as the lobar region, the humeral shields are completely absent, the translobar apodemes are fused to each other anterior to the terminal cleft, and the supranal concavity is clearly outlined. In both sexes of *A. phrygillus* and *A. zonotrichiae*, most areas of the prodorsal and hysteronotal shields lack the lacunae (although a few small lacunae can be present in the anterior part of the prodorsal shield); in males, the fused part of epimerites I has a pair of very short acute extensions directed posterior, setae *4b* are situated distinctly posterior to the level of setae *3a*, setae *ps3* are situated on inner margins of the opisthoventral shields; in females, the terminal cleft is long and constitutes about 2/3 of the lobar region length, the humeral shields are represented by rudimentary sclerites anterior to the bases of setae *cp*, the translobar apodemes are not fused to each other anterior to terminal cleft, and the supranal concavity is poorly distinct.

Etymology. The specific epithet derives from the generic name of the type host and is a noun in apposition.

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