

**SCHELORIBATES (SCHELORIBATES)
PARAMUSCICOLA SP.N. (ACARI, ORIBATIDA, SCHELORIBATIDAE)
FROM VENEZUELA**

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ABSTRACT: One new species of the genus *Scheloribates* (Oribatida, Scheloribatidae)—*S. (Scheloribates) paramuscicola* sp.n.—is described from leaf litter in the Aragua State, Northern Venezuela.

KEY WORDS: oribatid mite, *Scheloribates*, taxonomy, new species, morphology, Neotropical region

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INTRODUCTION

The oribatid mite genus *Scheloribates* (Acari, Oribatida, Scheloribatidae) comprises about 290 species (e.g., Subías 2022, online version 2024; Ermilov and Rybalov 2024; Ermilov *et al.* 2024); it has a cosmopolitan distribution. During the taxonomic identification of the representatives of the genus, collected from leaf litter in the Aragua State, Northern Venezuela, I found one new species belonging to the nominate subgenus. The main goal of the present paper is to describe a new species under the name *Scheloribates (Scheloribates) paramuscicola* sp.n.

Prior to this study, about 10 species of *S. (Scheloribates)* have been recorded from Venezuela (Behan-Pelletier *et al.* 1993; Subías and Shtanchaeva 2021).

METHODS

For measurement and illustration, specimens were mounted in lactic acid on temporary cavity slides. All body measurements are presented in micrometers (μm); body length was measured in lateral view, from the tip of the rostrum to the posterior edge of the notogaster; body width refers to the maximum width at the pteromorph level in dorsal aspect and to the maximum width at the ventral plate level in ventral view; the lengths of body setae were measured in lateral aspect. Formulas for leg setation are given in parentheses according to the sequence trochanter–femur–genu–tibia–tarsus (famulus included); formulas for leg solenidia are given in square brackets, according to the sequence genu–tibia–tarsus. Drawings were made with a camera lucida using a Leica DM 2500 light microscope.

Morphological terminology used in this paper mostly follows that of papers on *S. (Scheloribates)*

(e.g., Ermilov and Rybalov 2024; Ermilov *et al.* 2024); in addition, I relied on Norton (1977) for leg setal nomenclature, and Norton and Behan-Pelletier (2009) for overview.

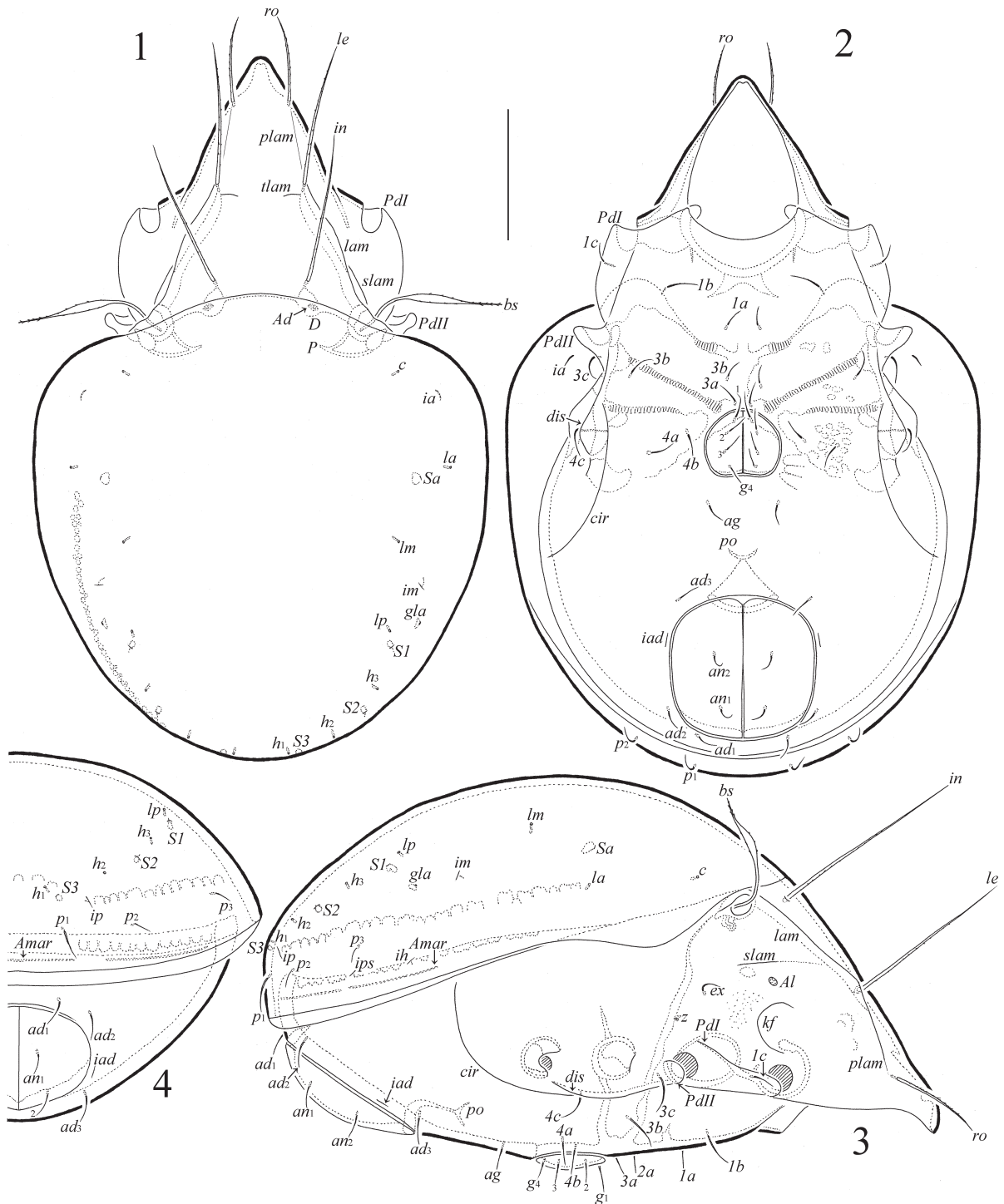
Abbreviations: *Prodorsum*: *lam*—lamella; *tlam*—translamella; *plam*—prolamella; *slam*—sublamella; *Al*—sublamellar porose area; *kf*—keel-shaped ridge; *ro*, *le*, *in*, *bs*, *ex*—rostral, lamellar, interlamellar, bothridial and exobothridial setae, respectively; *Ad*—dorsosejugal porose area. *Notogaster*: *D*—dorsophragma; *P*—pleuophragma; *c*, *la*, *lm*, *lp*, *h*, *p*—setae/setal alveoli; *Sa*, *S1*, *S2*, *S3*—saccules; *ia*, *im*, *ip*, *ih*, *ips*—lyrifissures; *gla*—opisthonotal gland opening. *Gnathosoma*: *a*, *m*, *h*—subcapitular setae; *or*—adoral seta; *d*, *l*, *v*, *sup*, *inf*, *cm*, *acm*, *ul*, *su*, *vt*, *lt*—palp setae; ω —palp solenidium; *cha*, *chb*—cheliceral setae; *Tg*—Trägårdh’s organ. *Epimeral and lateral podosomal regions*: *1a*, *1b*, *1c*, *2a*, *3a*, *3b*, *3c*, *4a*, *4b*, *4c*—epimeral setae; *z*—aperture of supracoxal gland; *PdI*, *PdII*—pedotecta I, II, respectively; *dis*—discidium; *cir*—circumpedial carina. *Anogenital region*: *g*, *ag*, *an*, *ad*—genital, aggenital, anal and adanal setae, respectively; *iad*—adanal lyrifissure; *Amar*—marginal porose area; *po*—preanal organ. *Legs*: *Tr*, *Fe*, *Ge*, *Ti*, *Ta*—trochanter, femur, genu, tibia and tarsus, respectively; ω , ϕ , σ —solenidia; *d*, *l*, *v*, *bv*, *ev*, *ft*, *tc*, *it*, *p*, *u*, *a*, *s*, *pv*, *pl*—setae; *pa*—porose area.

SYSTEMATICS

Scheloribates (Scheloribates) paramuscicola sp.n.

(Figs. 1–11)

Type material. Holotype (female) and three paratypes (two males and one female): Northern



Figs. 1–4. *Schelorbates (Schelorbates) paramuscicola* sp.n., adult (gnathosoma and legs omitted): 1—dorsal view; 2—ventral view; 3—right lateral view; 4—posterior view (left half omitted). Scale bar: 100 μ m.

Venezuela, Aragua State, Rancho Grande, 1450 m a. s. l., leaf litter, 26 February 1995 (R. W. Brooks); four paratypes (three males and one female): Northern Venezuela, Aragua State, Rancho Grande, Porto Chuelo pass, 1450 m a. s. l., leaf litter, 28 February 1995 (R. W. Brooks).

The holotype is deposited in the collection of the Canadian National Collection, Ottawa, Canada; seven paratypes are deposited in the collection of the University of Tyumen, Museum of Zoology, Tyumen, Russia. All specimens are preserved in 70% solution of ethanol with a drop of glycerol.



Figs. 5–11. *Scheloribates* (*Scheloribates*) *paramuscicola* sp.n., adult: 5—subcapitulum, ventral view; 6—palp, right, anti-axial view; 7—chelicera, left, para-axial view; 8—leg I, right, anti-axial view; 9—leg II (trochanter omitted), left, para-axial view; 10—leg III, left, anti-axial view; 11—leg IV, left, anti-axial view. Scale bars: 50 μm (8–11), 20 μm (5, 7), 10 μm (6).

Diagnosis. *Adult.* Body length: 525–585. Body surface without sculpturing and ornamentation. Rostrum narrowly rounded. Prolamella complete; translamella represented by two short lines near lamellae. Rostral, lamellar and interlamellar setae long, setiform, slightly barbed; $in > le > ro$; bothridial seta long, spindle-form, with lanceolate, sparsely barbed head with setiform, distinctly barbed apex. Pteromorph comparatively small, its anterior margin oblique. Three pairs of notogastral setae (p_1, p_2, p_3) short, setiform, roughened, pressed to surface of notogaster; other notogastral setae represented by alveoli. Epimeral and anogenital setae short, setiform, thin, roughened. Circumpedal carina medium-sized. Leg femur II rounded ventrodistally; tarsus I with 19 setae (l'' absent); genu II with two setae (v' absent).

Description of adult. *Measurements.* Body length: 585 (holotype), 525–540 (male paratypes), 585 (female paratypes); body width (level of pteromorphs): 420 (holotype), 375 (male paratypes), 405–420 (female paratypes); width of ventral plate: 375 (holotype), 315–330 (male paratypes), 360–375 (female paratypes).

Integument. Body color light brown. Surface nearly smooth; podosomal region and lateral part of prodorsum partially with dense microgranulate cerotegument.

Prodorsum. Rostrum slightly protruding, narrowly rounded. Lamella about $\frac{1}{2}$ length of prodorsum; prolamella complete (reaching insertion of ro) but indistinct in distal part; translamella represented by two short lines near lamellae; sublamella slightly developed; lateral keel-shaped ridge distinct; sublamellar porose area ($9-11 \times 7$) oval. Rostral (75–82), lamellar (131–139) and interlamellar (172–180) setae setiform, slightly barbed; bothridial seta (94–106) spindle-form, with smooth stalk (30–34) and lanceolate, sparsely barbed head (34–41) having setiform, distinctly barbed apex (30–34); exobothridial seta (22–26) setiform, thin, roughened. Dorsosejugal porose area ($9-11 \times 7$) oval, poorly observable.

Notogaster. Anterior notogastral margin convex medially. Notogaster distinctly elongate. Pteromorph comparatively small, rounded laterally, its anterior margin oblique (not perpendicular to longitudinal axis of body in dorsal aspect). Three pairs of notogastral setae (p_1 : 26; p_2, p_3 : 13–15) setiform, thin, roughened, pressed to surface of notogaster, but p_2, p_3 frequently broken; other notogastral setae (seven pairs) represented by alveo-

li. Four pairs of sacculles with small opening and drop-like channel. Opisthonotal gland opening and all lyrifissures distinct.

Gnathosoma. Subcapitulum size: 127–131 \times 97–101; subcapitular setae (a : 22–26; m : 26–30; h : 41–45) setiform, roughened; m thinner than a and h ; both adoral setae (13–15) setiform, barbed. Palp length: 75–79; postpalpal seta (5) spiniform, smooth. Chelicera length: 142–146; setae (cha : 37–41; chb : 26–30) setiform, barbed.

Epimeral and lateral podosomal regions. Epimeral formula: 3–1–3–3; all setae ($1b, 3b, 3c, 4c$: 34–41; others: 15–22) setiform, thin, roughened. Humeral porose areas Am and Ah not observable but indistinct porosity (most likely, Ah) present. Pedotectum II rounded laterally in ventral aspect. Discidium broadly rounded. Circumpedal carina medium-sized, directed to pedotectum II but not reaching it.

Anogenital region. Genital (g_1 : 19–22; g_2-g_4 : 15–19), aggenital (19–22), anal (15–19) and adanal (22–26) setae setiform, thin, roughened. Adanal lyrifissure distinct, close and parallel to anal plate. Marginal porose area complete, band-like, sometimes shortly interrupted.

Legs. Median claw thick; lateral claws thin, with indistinct tubercle distoventrally; all claws slightly barbed on dorsal side. Ventrobasal tubercle of tibiae I, II slightly observable. Femur II broadly rounded ventrodistally. Proximoventral porose area on tarsi I–IV, distoventral porose area on tibiae I–IV, dorso-paraxial porose area on femora I–IV and on trochanters III, IV distinct. Formulas of leg setation and solenidia: I (1–5–3–4–19) [1–2–2], II (1–5–2–4–15) [1–1–2], III (2–3–1–3–15) [1–1–0], IV (1–2–2–3–12) [0–1–0]; homology of setae and solenidia indicated in Table 1. Seta s on tarsus I setiform (not eupathidial), barbed, located between (a) and (pv).

Remarks. *Scheloribates (Scheloribates) paramuscicola* sp.n. is similar to *S. (S.) muscicola* Hammer, 1961 (as a representative of the genus *Hemileius* Berlese, 1916 in Subias 2022) from Peru (see Hammer 1961) in the main morphological traits. Namely, in a comparatively large body size (appr. 600); bothridial seta spindle-form with setiform apex; anterior margin of pteromorph oblique (not perpendicular to longitudinal axis of body in dorsal aspect); dorsal notogastral setae represented by alveoli; relative length of prodorsal setae: $in > le > ro$; setal alveolus lm inserted posterior to sacculle Sa . However, the new species differs from *S. (S.) muscicola* in the translamella represented by

two short lines near lamellae (vs. translamella complete); the presence (vs. absence) of notogastral setae p_1, p_2, p_3 ; and in having larger pteromorphs.

Etymology. The specific epithet *paramuscicola* refers to the similarity between the new species and *Scheloribates* (*Scheloribates*) *muscicola* Hammer, 1961.

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Table 1. Leg setation and solenidia of adult *Scheloribates* (*Scheloribates*) *paramuscicola* sp.n.

Leg	<i>Tr</i>	<i>Fe</i>	<i>Ge</i>	<i>Ti</i>	<i>Ta</i>
I	v'	$d, (l), bv'', v''$	$(l), v', \sigma$	$(l), (v), \varphi_1, \varphi_2$	$(ft), (tc), (it), (p), (u), (a), s, (pv), v', (pl), \varepsilon, \omega_1, \omega_2$
II	v'	$d, (l), bv'', v''$	$(l), \sigma$	$(l), (v), \varphi$	$(ft), (tc), (it), (p), (u), (a), s, (pv), \omega_1, \omega_2$
III	l', v'	d, l', ev'	l', σ	$l', (v), \varphi$	$(ft), (tc), (it), (p), (u), (a), s, (pv)$
IV	v'	d, ev'	d, l'	$l', (v), \varphi$	$ft'', (tc), (p), (u), (a), s, (pv)$

Note: Roman letters refer to normal setae; Greek letters—to solenidia (except ε —famulus); single quotation mark (') designates seta on the anterior and double quotation mark (")—seta on the posterior side of a given leg segment; parentheses refer to a pair of setae.