Persian J. Acarol., 2025, Vol. 14, No.3, pp. 455–464.
https://doi.org/10.22073/pja.v14i3.87161
Journal homepage: http://www.biotaxa.org/pja

http://zoobank.org/urn:lsid:zoobank.org:pub:A3C111BA-FA78-41BA-AAB9-55527D58ADFB

Article

Oribatid mites (Acari, Oribatida) from riverine environments in New Caledonia

Sergey G. Ermilov[1*] and Nathalie J. Mary[2]

1. *University of Tyumen, Institute of Environmental and Agricultural Biology (X-BIO), Tyumen, Russia; E-mail: ermilovacari@yandex.ru*
2. *Etude des Hydrosystèmes Continentaux tropicaux (ETHYC'O), Nouméa, New Caledonia; E-mail: ethyco2005@gmail.com*

[*] Corresponding author

ABSTRACT
The present study is based on oribatid mite materials collected from benthic samples in four river locations on the Grande Terre Island, New Caledonia. A list of eight species, belonging to six genera and five families, is presented; among them are taxa that are new for the fauna of New Caledonia. One new species of the genus *Trhypochthoniellus* (Trhypochthoniidae)—*T. grandensis* **sp. nov.**— is described; it is mainly characterized by the nasiform rostrum having ridges; slightly polygonate ornamentation on the notogaster and in the anogenital region; the absence of the bothridial seta and bothridium; the relative length of prodorsal setae: *in* > *le* > *ro*; 14 pairs (p_3 absent) of the notogastral setae setiform (except f_1 as alveolus), nearly smooth; the relative length of the notogastral setae: c_3, e_2, h_1, h_2, p_2 > *cp*, e_1, h_3, p_1 > d_2 > c_1, c_2, d_1, f_2; six pairs of genital setae.

KEY WORDS: Australasian region, fauna, morphology, new record, taxonomy, *Trhypochthoniellus*.

PAPER INFO.: Received: 18.04.2025, Accepted by: *O. Joharchi*, 26.05.2025, Published: 15.07.2025

INTRODUCTION

The oribatid mites (Acari, Oribatida) of New Caledonia are moderately well documented, with approximately 60 species currently known (e.g., Balogh and Balogh 1983; Ermilov *et al*. 2013; Ermilov and Mary 2020; Subías 2022, online version 2024). The present study is based on materials collected from benthic samples in rivers on the Grande Terre Island. The main goals of our paper are as follows: to present a list of the identified taxa and to describe a new species belonging to the genus *Trhypochthoniellus* Willmann, 1928 (Trhypochthoniidae) under the name *Trhypochthoniellus grandensis* **sp. nov.**

Trhypochthoniellus was proposed by Willmann (1928), with *Trhypochthonius* (*Trhypochthoniellus*) *setosus* Willmann, 1928 as type species (it is regarded as "forma" of *T. longisetus* (Berlese, 1904) – see Weigmann 1997, 1999). The genus comprises 11 species and three subspecies having a cosmopolitan distribution collectively (Subías 2022, online version 2024). Representatives of *Trhypochthoniellus* inhabit numerous substrates (e.g. soil, litter, moss) in different biotopes (Fujikawa 2000; Kuriki 2005); some of them are associated with freshwater habitats and flowing waters, living on aquatic plants or in aquatic sediments (Weigmann and Deichsel 2006; Behan-Pelletier and Lindo 2023). The main generic characters were summarized by Ermilov and

How to cite: Ermilov, S.G. & Mary, N.J. (2025) Oribatid mites (Acari, Oribatida) from riverine environments in New Caledonia. *Persian Journal of Acarology*, 14(3): 455–464.

Weigmann (2015). An identification key to 10 species of *Trhypochthoniellus* was presented by Ojeda *et al*. (2020).

Prior to this study, one species of *Trhypochthoniellus* was recorded in New Caledonia, *T. longisetus* (Berlese 1904) (Ermilov and Mary 2020).

MATERIAL AND METHODS

Sampling – Benthic samples containing oribatid mites were collected using a Surber Sampler (steel frame (25×20 cm) with a sieve (mesh size 250 mm)) in four river locations on the Grande Terre Island in New Caledonia (Figs. 1–8):

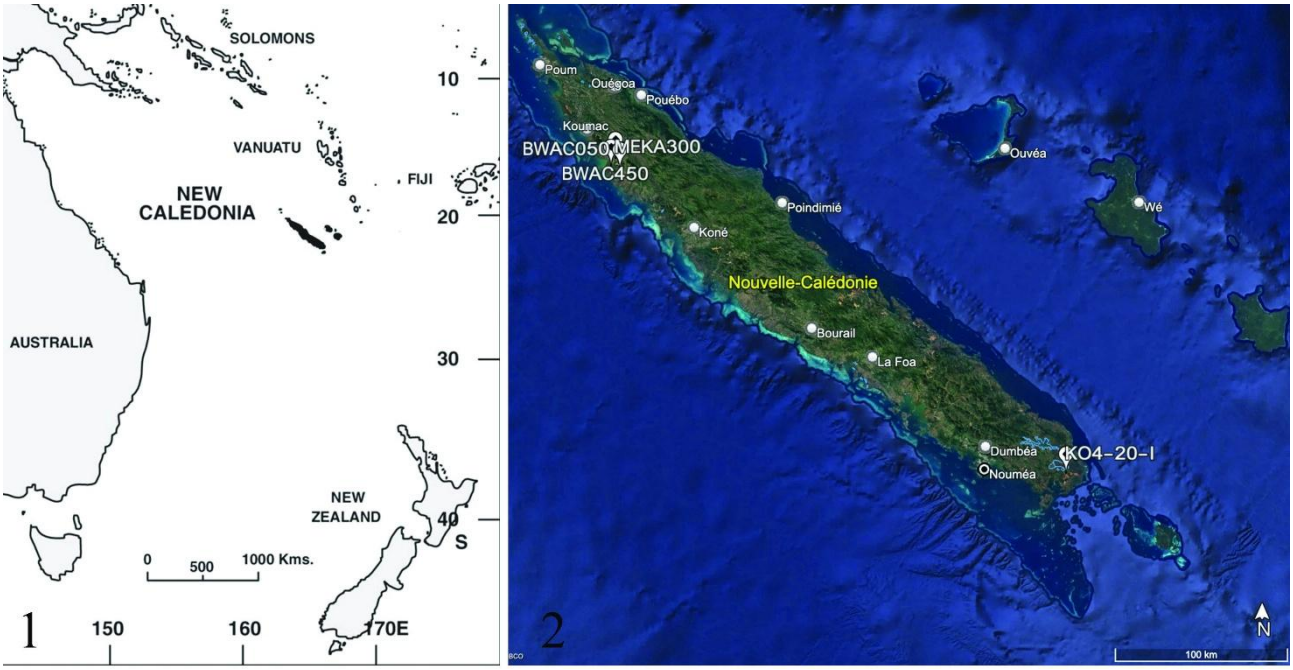
– location 1 (KO4-20-I): South of Grande Terre, Kwé Ouest River, 22° 17' 45.8912" S, 166° 55' 37.5985" E, 177 m a.s.l. (N.J. Mary);

– location 2 (MEKA300): North of Grande Terre, Ouaco Region, Mékandoui River, 20° 42' 27.6253" S, 164° 27' 23.7960" E, 30 m a.s.l. (N.J. Mary);

– location 3 (BWAC450): North of Grande Terre, Ouaco Region, Bwacibu River, 20° 44' 45.0503" S, 164° 25' 57.1746" E, 22 m a.s.l. (N.J. Mary);

– location 4 (BWAC050): North of Grande Terre, Ouaco Region, Bwacibu River, 20° 45' 38.3792" S, 164° 28' 52.0979" E, 141 m a.s.l. (N.J. Mary).

Oribatid mites were separated into 70% ethanol using a Leica MZ7.5 stereomicroscope.



Figures 1–2. Maps of locations – 1. New Caledonia in the Australasian region; 2. Locations within New Caledonia: KO4-20-I (location 1); MEKA300 (location 2); BWAC450 (location 3); BWAC050 (location 4).

Observation and documentation – For measurement and illustration, specimens were mounted in lactic acid on temporary cavity slides. All measurements are in micrometers (µm); body length was measured in lateral view, from the tip of the rostrum to the posterior edge of the notogaster; notogastral width refers to the maximum width in dorsal aspect; setal lengths 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 transmission light microscope.

Figures 3–8. Photos of the river locations and sampling – 3, 4. KO4-20-I (location 1); 5. MEKA300 (location 2); 6. BWAC450 (location 3); 7. BWAC050 (location 4); 8. Sampling of benthic samples by Dr. Nathalie J. Mary.

Terminology – Morphological terminology is mostly that of Grandjean (references in Travé and Vachon 1975); also, Norton (1977), Norton and Ermilov (2024) for leg setal notation, and Norton and Behan-Pelletier (2009) for general overview, are used.

Abbreviations – *Prodorsum*: *ro*, *le*, *in*, ex_1 = rostral, lamellar, interlamellar, and first exobothridial setae, respectively; ex_2 = alveolus of second exobothridial seta. *Notogaster*: c_1–c_3, *cp*, d_1, d_2, e_1, e_2, f_2, h_1–h_3, p_1, p_2 = setae; f_1 = setal alveolus; *ia*, *im*, *ip*, *ih*, *ips* = lyrifissures; *gla* = opisthonotal gland opening. *Gnathosoma*: *a*, *m*, *h* = subcapitular setae; or_1–or_3 = adoral setae; *d*, *sup*, *cm*, *acm*, *ul*, *su*, *vt*, *lt* = palp setae; ω = palp solenidion; *cha*, *chb* = cheliceral setae; *Tg* = Trägårdh's organ. *Epimeral region*: *1a*, *1b*, *1c*, *2a*, *3a*, *3b*, *3c*, *4a*, *4c* = setae. *Anogenital region*: g_1–g_6, *an*, ad_1,

ad_2 = genital, anal, and adanal setae, respectively; *iad* = adanal lyrifissure. *Legs*: ω, φ, σ = solenidia; *d*, *l*, *v*, *bv*, *ev*, *ft*, *tc*, *it*, *p*, *u*, *a*, *s*, *pv* = setae.

Notes – References to the original descriptions of species are not included in the *References* section.

LIST OF TAXA

Distribution mostly from Subías (2022, online version 2024).

Malaconothridae

Tyrphonothrus crassisetosus fijiensis (Hammer, 1971): location 1 (2 ex.). Distribution: Australian, Afrotropical, and Oriental regions.
Tyrphonothrus maior (Berlese, 1910): location 1 (14 ex.). Distribution: Semicosmopolitan. New record of the species in New Caledonia.

Trhypochthoniidae

Allonothrus russeolus reticulatus Hammer, 1972: location 3 (1 ex.). Distribution: Australian and Oriental regions.
Trhypochthoniellus grandensis **sp. nov.**: location 1 (10 ex.). Distribution: New Caledonia.

Hydrozetidae

Hydrozetes lemnae (Coggi, 1897): locations 1 (1 ex.), 2 (37 ex.), 3 (1 ex). Distribution: Semicosmopolitan.

Scheloribatidae

Scheloribates fimbriatus whitteni Jacot, 1934: locations 1 (1 ex.), 3 (1 ex.). Distribution: Marquesas Islands. New record of the species in New Caledonia.
Scheloribates tubuaiensis Sellnick, 1959: location 4 (1 ex.). Distribution: Australian region, Caucasus.

Galumnidae

Galumna fordi (Jacot, 1934): location 2 (1 ex.). Distribution: Tropical region. New record of the species in New Caledonia.

The list includes eight species, belonging to six genera and five families. *Tyrphonothrus maior*, *Scheloribates fimbriatus whitteni*, and *Galumna fordi* are reported in New Caledonia for the first time. *Scheloribates fimbriatus whitteni* is known only in the Marquesas Islands, the other species (except one new species) have broad distributions (more than one geographical region), including two semicosmopolitan species.

TAXONOMY

Family Trhypochthoniidae
Genus *Trhypochthoniellus* Willmann, 1928

Type species: *Trhypochthonius* (*Trhypochthoniellus*) *setosus* Willmann, 1928

Trhypochthoniellus grandensis sp. nov. (Figs. 9–21)

http://zoobank.org/urn:lsid:zoobank.org:act:906C1FC0-6E21-4615-A111-BF853555F28A

Type material

Holotype (female) and nine paratypes (nine females): New Caledonia, Grande Terre Island, Kwé Ouest River, 22° 17' 45.8912" S, 166° 55' 37.5985" E, 177 m a.s.l., location 1 (KO4-20-I), benthic

sample (N.J. Mary).

Type deposition

The holotype is deposited in the collection of the Senckenberg Museum of Natural History, Görlitz, Germany; three paratypes are deposited in the collection of the University of Tyumen, Museum of Zoology, Tyumen, Russia; six paratypes are in the personal collection of the first author. All specimens are preserved in 70% solution of ethanol with a drop of glycerol.

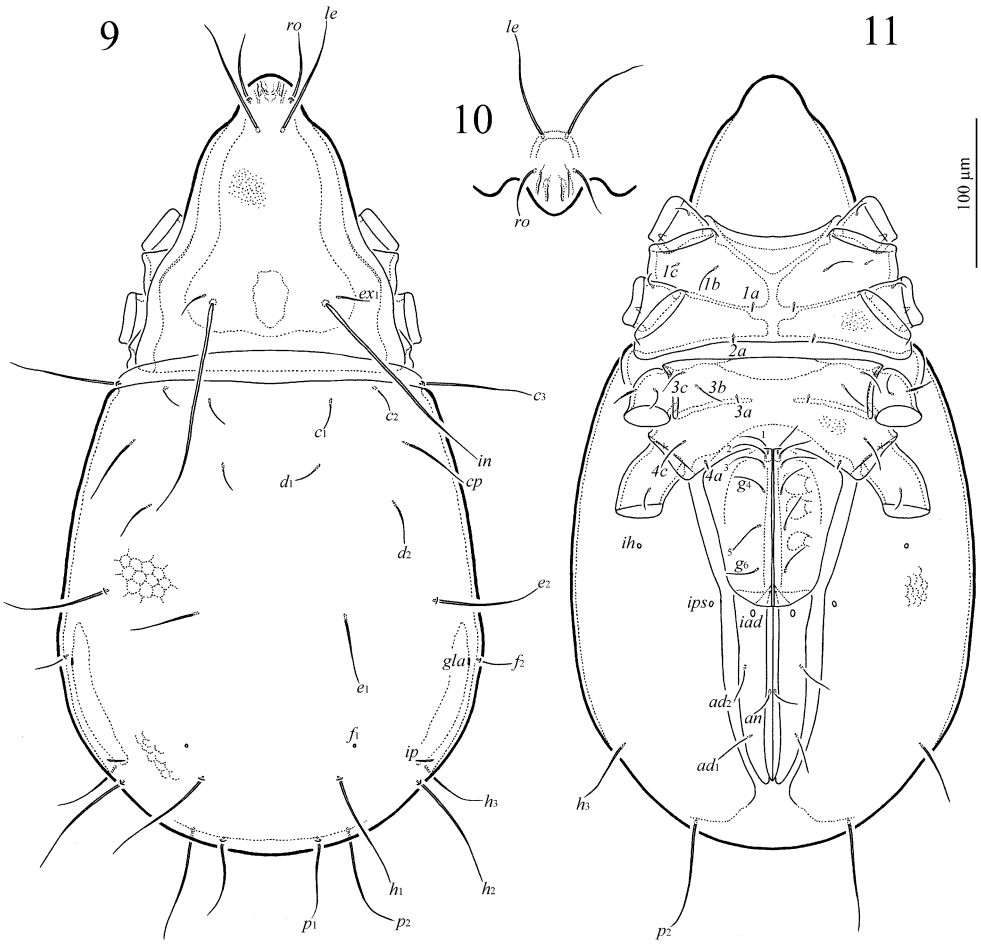
Diagnosis

Body length: 510–555. Rostrum nasiform, with short, longitudinal ridges. Notogaster and anogenital region with slight polygonate ornamentation. Bothridial seta and bothridium absent. Relative length of prodorsal setae: *in* > *le* > *ro*. Fourteen pairs of notogastral setae (p_3 absent; f_1 as alveolus) setiform, nearly smooth; relative length of notogastral setae: c_3, e_2, h_1, h_2, p_2 > *cp*, e_1, h_3, p_1 > d_2 > c_1, c_2, d_1, f_2). Six pairs of genital setae. All leg tarsi with three claws.

Description

Measurements – Body length: 540 (holotype), 510–555 (paratypes); body width: 300 (holotype), 277–300 (paratypes).

Integument – Body color light brownish to light yellowish. Body surface densely porose (clearly visible under high magnification, ×1000). Notogaster and anogenital region with poorly observed polygonate ornamentation. Rostral region with several short, longitudinal ridges.



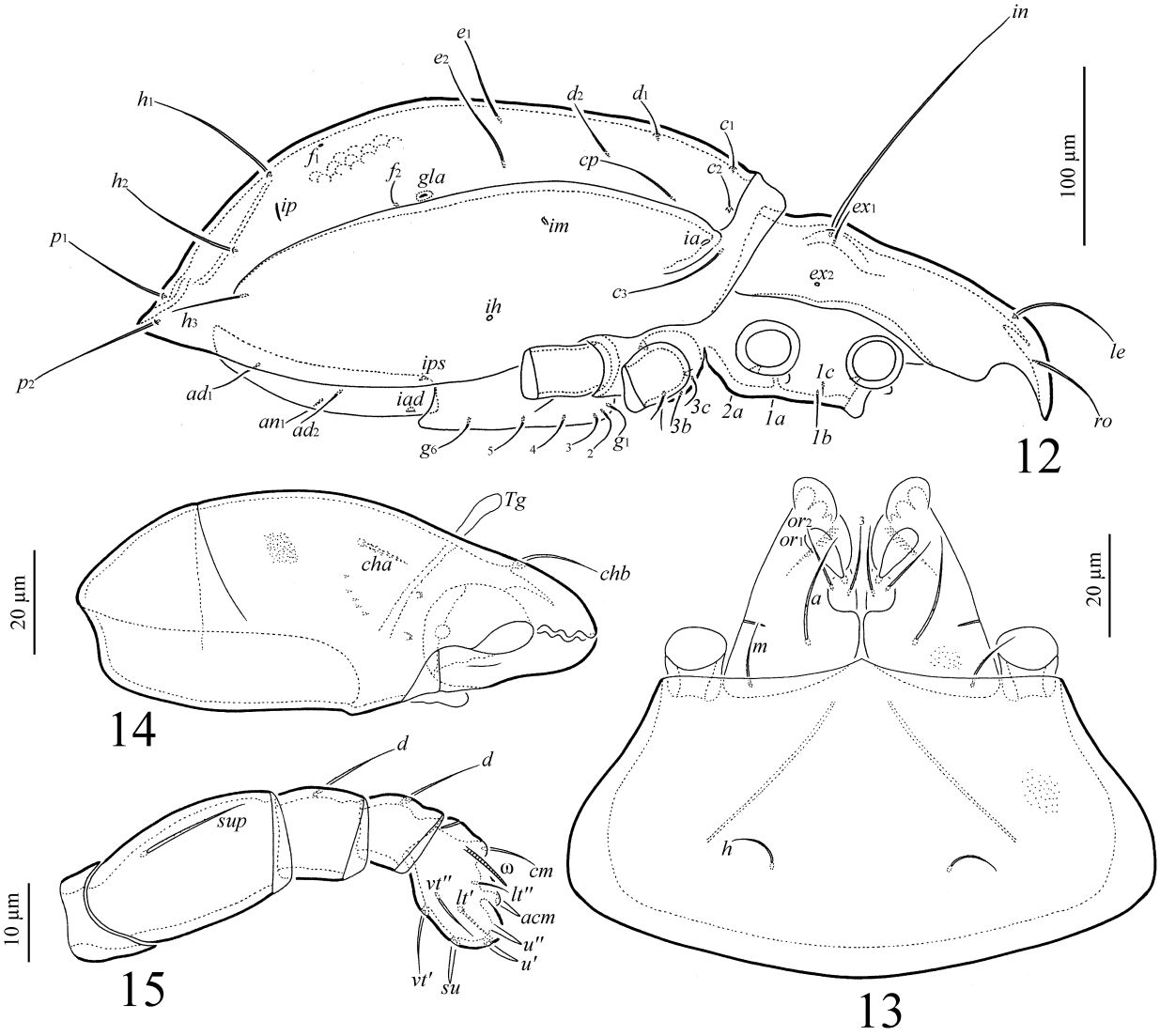
Figures 9–11. *Trhypochthoniellus grandensis* **sp. nov.** (adult; gnathosoma and legs except trochanters omitted) – 9. Dorsal view; 10. Rostrum, dorsal view; 11. Ventral view.

Prodorsum (Figs. 9, 10, 12) – Rostrum distinctly protruding, nasiform, narrowly rounded, curved ventrad. Rostral (45–49), lamellar (79–82), interlamellar (150–157), and first exobothridial (19–26) setae setiform, nearly smooth. Distance between insertions of setae *le–le* shorter than *ro–ro*. Bothridial seta and bothridium absent. Second exobothridial seta represented by alveolus.

Notogaster (Figs. 9, 12) – With parallel lateral sides or slightly dilated medioposteriorly; anterior margin nearly straight; posterior margin rounded. Fourteen pairs of setae, including alveolus of f_1 (seta p_3 completely absent); c_1, c_2, d_1, f_2: (19–22), d_2 (30–37), *cp*, e_1, h_3, p_1 (52–64), and c_3, e_2, h_1, h_2, p_2 (75–82) setiform, nearly smooth; f_1 slightly distanced from h_1. Distance between insertions of setae c_1–c_1 subequal to d_1–d_1 or slightly longer. Opisthonotal gland opening and all lyrifissures distinct.

Gnathosoma (Figs. 13–15) – Subcapitulum size: 101–105 × 109–112; subcapitular setae (*a*: 22; *m*, *h*: 11–13) setiform, roughened; *a* thicker than *m* and *h*; adoral seta or_1 (9–11) leaf-shaped, smooth versus or_2 (11–13) and or_3 (11–13) setiform, roughened. Palp length: 67–71; setation: 0–1–1–1–9(+ω). Chelicera length: 109–112; seta *cha* (13) setiform, barbed; *chb* (19) setiform, roughened.

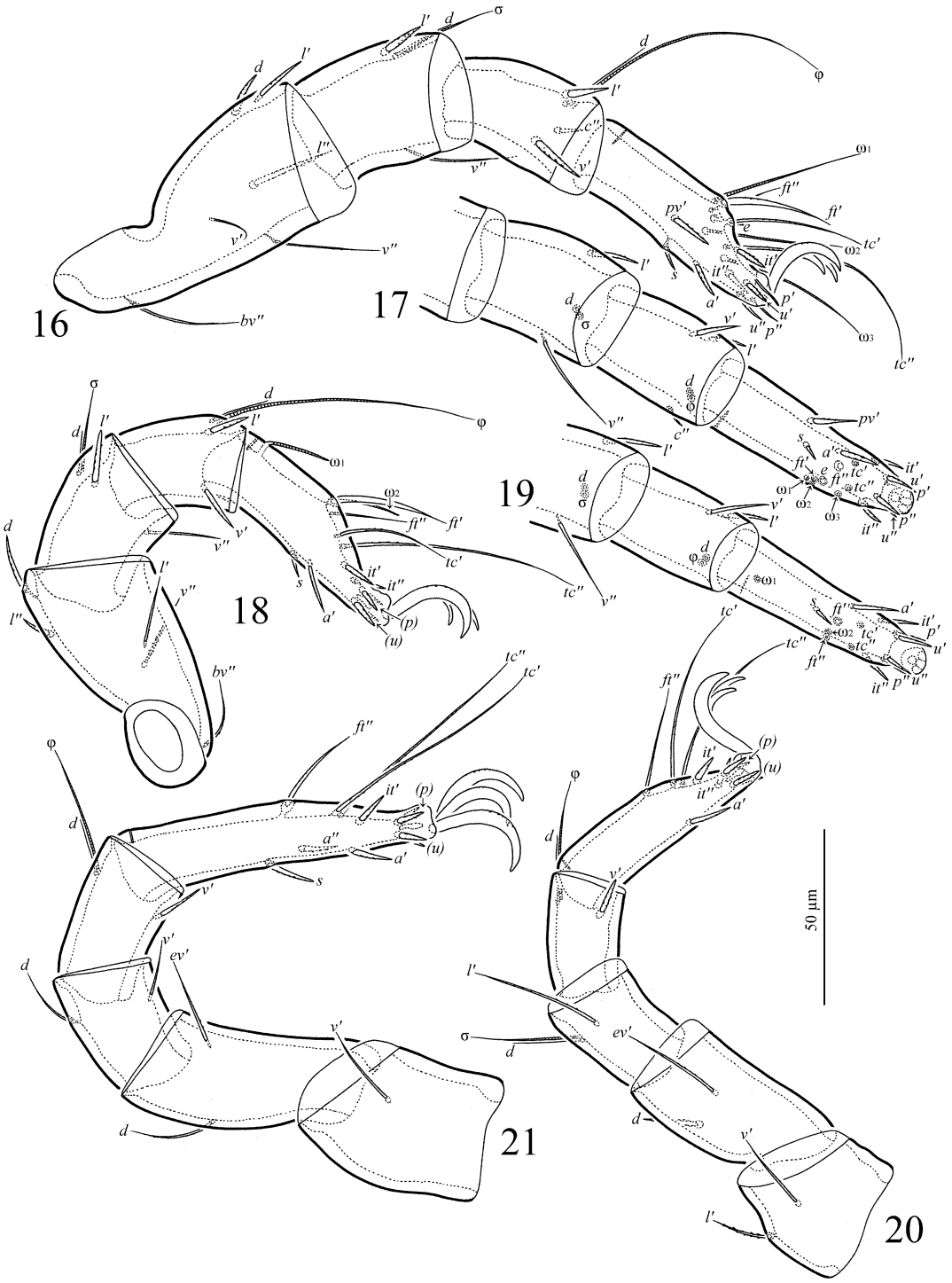
Epimeral and lateral podosomal regions (Figs. 11, 12) – Epimeral setal formula: 3–1–3–2; setae *1a*, *1c*, *2a*, *3a*, *4a* (5) spiniform; *1b*, *3b*, *3c*, *4c* (19–22) setiform, roughened.



Figures 12–15. *Trhypochthoniellus grandensis* **sp. nov.** (adult) – 12. Right lateral view (gnathosoma and legs except trochanters III, IV omitted); 13. Subcapitulum (dissected), ventral view; 14. Palp (dissected), right, antiaxial view; 15. Chelicera (dissected), right, antiaxial view.

Anogenital region (Figs. 11, 12) – Anogenital formula: 6–0–1–2; genital (26–30), anal (19–22), and adanal (26–30) setae setiform, roughened. Anal lyrifissure not visible; adanal lyrifissure distinct.

Legs (Figs. 16–21) – Tridactylous; claws similar in thickness, slightly barbed on dorsal side. Formulas of leg setation and solenidia: I (1–6–3–4–14) [1–1–3], II (1–5–3–3–12) [1–1–2], III (2–2–2–2–10) [1–1–0], IV (1–2–2–2–11) [0–1–0]; homology of setae and solenidia indicated in Table 1.



Figures 16–21. *Trhypochthoniellus grandensis* **sp. nov.** (adult) – 16. Leg I (trochanter omitted), left paraxial view; 17. Tarsus, tibia, genu, and anterior part of femur of leg I (solenidia and many dorsal setae except their insertions omitted), left, ventral view; 18. Leg II (trochanter omitted), left paraxial view; 19. Tarsus, tibia, and anterior part of genu of leg II (solenidia and many dorsal setae except their insertions omitted), left, ventral view; 20. Leg III, left, antiaxial view; 21. Leg IV, left, antiaxial view.

Table 1. Leg setation and solenidia of adult *Trhypochthoniellus grandensis* **sp. nov.**

Leg	*Tr*	*Fe*	*Ge*	*Ti*	*Ta*
I	*v′*	*d*, *(l)*, *bv″*, *(v)*	*dσ*, *l′*, *v″*	*dφ*, *l′*, *v′*, *c″*	*(ft)*, *(tc)*, *(it)*, *(p)*, *(u)*, *a′*, *s*, *pv′*, *e*, ω$_1$, ω$_2$, ω$_3$
II	*v′*	*d*, *(l)*, *bv″*, *v″*	*dσ*, *l′*, *v″*	*dφ*, *l′*, *v′*	*(ft)*, *(tc)*, *(it)*, *(p)*, *(u)*, *a′*, *s*, ω$_1$, ω$_2$
III	*l′*, *v′*	*d*, *ev′*	*dσ*, *l′*	*dφ*, *v′*	*ft″*, *(tc)*, *(it)*, *(p)*, *(u)*, *a′*
IV	*v′*	*d*, *ev′*	*d*, *v′*	*dφ*, *v′*	*ft″*, *(tc)*, *it′*, *(p)*, *(u)*, *(a)*, *s*

Note: *Tr*, *Fe*, *Ge*, *Ti*, *Ta* = trochanter, femur, genu, tibia, and tarsus, respectively. Roman letters refer to normal setae; Greek letters to solenidia; *dφ* and *dσ* = seta and solenidion coupled; single prime (′) marks setae on the anterior and double prime (″) setae on the posterior side of a given leg segment; parentheses refer to a pair of setae.

Comparison

Trhypochthoniellus grandensis **sp. nov.** is similar to *T. malaconothroiformis* Ermilov, Hugo-Coetzee & Theron, 2017 from South Africa, having a medium number of genital setae (less than eight pairs), the presence of notogastral setae that vary greatly in length, and in the absence of the bothridial seta, bothridium, and prodorsal polygonate ornamentation. The new species differs from the latter in having six (versus seven) pairs of genital setae; the morphology of the rostrum (nasiform, with several longitudinal ridges versus not nasiform, with median, longitudinal furrow); the relative lengths of the notogastral setae (c_3, e_2, h_1, h_2, $p_2 > cp$, e_1, h_3, $p_1 > d_2 > c_1$, c_2, d_1, f_2 versus $p_2 > c_3$, cp, e_2, f_2, h_1, h_2, h_3, $p_1 > c_2$, d_2, $e_1 > c_1$, d_1); the presence (versus absence) of slight polygonate ornamentation on the notogaster and in the anogenital region; and the number of setae on some leg segments (*it″* of tarsus I present versus absent; *l′* of trochanter III present versus absent).

Etymology

The species name *grandensis* refers to the island of origin, Grande Terre.

ACKNOWLEDGEMENTS

We thank two anonymous reviewers for valuable comments.

REFERENCES

Balogh, J. & Balogh, P. (1983) New oribatids (Acari) from the Pacific region. *Acta Zoologica Academiae Scientiarum Hungaricae*, 29: 303–325.

Behan-Pelletier, V.M. & Lindo, Z. (2023) Oribatid Mites – Biodiversity, Taxonomy and Ecology. CRC Press, Boca Raton–London–New York, 494 pp. DOI: 10.1201/9781003214649

Berlese, A. (1904) Acari nuovi. Manipulus III. *Redia*, 2: 10–32.

Ermilov, S.G. & Mary, N.A. (2020) Contribution to the knowledge of oribatid mites (Acari, Oribatida) of New Caledonia. *Zoologichesky Zhurnal*, 99: 405–412. DOI: 10.31857/S0044513420040066

Ermilov, S.G. & Weigmann, G. (2015) A new species of *Trhypochthoniellus* (Acari: Oribatida: Trhypochthoniidae) from Chile, with remarks on diagnosis of the genus. *Biologia*, 70: 1495–1500. DOI: 10.1515/biolog-2015-0174

Ermilov, S.G., Hugo-Coetzee, E.A. & Theron, P.D. (2017) New and interesting moss mites (Acari, Oribatida) from South Africa, with description of two new species. *Systematic and Applied Acarology*, 22: 1560–1572. DOI: 10.11158/saa.22.10.2

Ermilov, S.G., Tolstikov, A.V., Mary, N. & Schatz, H. (2013) Oribatid mites (Acari, Oribatida) from

riverine environments of some islands in Oceania. *ZooKeys*, 318: 47–57. DOI: 10.3897/zookeys.318.5971

Fujikawa, T. (2000) Five new species of the genera *Trhypochthoniellus* and *Trhypochthonius*. *Edaphologia*, 65: 35–54.

Kuriki, G. (2005) Oribatid mites from several mires in northern Japan I. Two new species of the genus *Trhypochthoniellus* (Acari: Oribatida). *Journal of the Acarological Society of Japan*, 14: 83–92.

Norton, R.A. (1977) A review of F. Grandjean's system of leg chaetotaxy in the Oribatei (Acari) and its application to the family Damaeidae. *In*: Dindal, D.L. (Ed.), *Biology of oribatid mites*. SUNY College of Environmental Science and Forestry, Syracuse, pp. 33–61.

Norton, R.A. & Behan-Pelletier, V.M. (2009) Suborder Oribatida. *In*: Krantz, G.W. & Walter, D.E. (Eds.), *A Manual of Acarology*. 3rd edition.Texas Tech University Press, Lubbock, pp. 430–564.

Norton, R.A. & Ermilov, S.G. (2024) Evaluation of morphological traits in Trhypochthoniidae with focus on *Allonothrus*, and morphology-molecule conflict in classification and phylogeny of Nothrina (Acari: Oribatida). *Zootaxa*, 5556: 144–199. DOI: 10.11646/zootaxa.5556.1.13

Ojeda, M., Velez, P., Espinosa-Asuar, L., Eguiarte, L.E. & Souza, V. (2020) A new species of *Trhypochthoniellus* (Acari: Oribatid: Trhypochthoniidae) from Cuatro Ciénegas, Coahuila, Mexico, and a key to the world species. *Systematic and Applied Acarology*, 25: 974–985. DOI: 10.11158/saa.25.6.3

Subías, L.S. (2022) Listado sistemático, sinonímico y biogeográfico de los ácaros oribátidos (Acariformes, Oribatida) del mundo (excepto fósiles). *Monografías Electrónicas Sociedad Entomológica Aragonesa*, 12: 1–539.

Subías, L.S. (2024) Listado sistemático, sinonímico y biogeográfico de los ácaros oribátidos (Acariformes: Oribatida) del mundo (excepto fósiles), 19ª actualización, 1–545. Available from: http://bba.bioucm.es/cont/docs/RO_1.pdf (Accessed in January 2024).

Travé, J. & Vachon, M. (1975) François Grandjean. 1882–1975 (Notice biographique & bibliographique). *Acarologia*, 17: 1–19.

Weigmann, G. (1997) New and old species of Malaconothroidea from Europe (Acari, Oribatida). *Spixiana*, 20: 199–218.

Weigmann, G. (1999) Morphological variability in populations of a thelytokous mite, *Trhypochthoniellus longisetus* (Oribatida), with notes on synonymy. *In*: Bruin, J., van der Geest, L.P.S. & Sabelis, M.W. (Eds.), *Ecology and evolution of the Acari*. Kluwer Academic Publishers, Dordrecht, pp. 581–586.

Weigmann, G. & Deichsel, R. (2006) 4. Acari: Limnic Oribatida. *In*: Gerecke, R. (Ed.), *Chelicerata, Araneae, Acari I. Süßwasserfauna von Mitteleuropa 7/2–1*. Spektrum, München, pp. 89–112.

Willmann, C. (1928) Neue Oribatiden. *Zoologischer Anzeiger*, 76: 1–5.

کنه‌های اوریباتید (Acari, Oribatida) از محیط‌های رودخانه‌ای در کالدونیای جدید

سرگی جی. ارمیلوف[1]* و ناتالی جِی. ماری[2]

۱. دانشگاه تیومن، مؤسسه زیست‌شناسی زیست‌محیطی و کشاورزی (X-BIO)، تیومن، روسیه؛ رایانامه: ermilovacari@yandex.ru

۲. مطالعه هیدروسیستم‌های قاره‌ای گرمسیری (ETHYC'O)، نومئا، کالدونیای جدید؛ رایانامه: ethyco2005@gmail.com

* نویسندهٔ مسئول

چکیده

مطالعه حاضر بر اساس نمونه‌های هرناهای اوریباتید جمع‌آوری‌شده از نمونه‌های کف‌زی در چهار مکان رودخانه‌ای در جزیره گراند تره، کالدونیای جدید است. فهرستی از هشت گونه، متعلق به شش جنس و پنج خانواده ارایه شده است. در میان آنها گونه‌هایی وجود دارند که برای زیاگان کالدونیای جدید جدیدند. گونهٔ جدید از جنس - *Trhypochthoniellus* (Trhypochthoniidae) – ***T. grandensis* sp. nov.** توصیف می‌شود. این گونه بیشتر با خرطوم بینی‌مانند لبه‌دار؛ تزئینات کمی چندضلعی روی شکم‌گرده و در ناحیه جنسی–مخرجی؛ عدم وجود موی وشادی و وشاد؛ طول نسبی موهای پشته: موی بین‌تیغه‌ای < موی تیغه‌ای < موی خرطومی؛ ۱٤ جفت (عدم وجود p_3) از موهای شکم‌گرده مویی شکل (به جز fl که فقط حفره دارد)، کم و بیش بدون انشعاب؛ طول نسبی موهای شکم‌گرده: c_3، e_2، h_1، h_2، $cp < p2$، e_1، h_3، $p_1 < d_2$؛ شش جفت موهای تناسلی مشخص می‌شود.

واژگان کلیدی: منطقه استرالیا، زیاگان، ریخت‌شناسی، گزارش جدید، آرایه‌شناسی، *Trhypochthoniellus*.

اطلاعات مقاله: تاریخ دریافت: ۱٤۰٤/۱/۲۹، تاریخ پذیرش توسط /. جوهرچی: ۱٤۰٤/۳/۵، تاریخ چاپ: ۱٤۰٤/٤/۲٤