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Article

Additions to the oribatid mite (Acari, Oribatida) fauna of Guatemala, with description of a new species of *Pergalumna*

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ABSTRACT
The present study is based on oribatid mite material collected from five locations in Eastern Guatemala. A list of 98 species, belonging to 68 genera and 43 families, is presented; 70 species are recorded for the first time in Guatemalan fauna. A new species of genus *Pergalumna*, *P. paraobsidiana* **sp. nov.** is described from rainforest litter.

KEY WORDS: Central America, fauna, galumnid mites, morphology, new record, new species, taxonomy.

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INTRODUCTION

Oribatid mites (Acari, Oribatida) of Guatemala are insufficiently studied (Stoll 1893; Willmann 1930; Woolley 1966; Hammer 1969; Mahunka 1978, 1983; Behan-Pelletier and Ryabinin 1991; Schatz 2006). The main goals of our paper are as follows: to present a list of all identified taxa (including new records) collected from five locations in Eastern Guatemala, and to describe one new species belonging to the nominate subgenus of *Pergalumna* Grandjean, 1936 (Galumnidae) as *Pergalumna paraobsidiana* **sp. nov.**

The genus *Pergalumna* was proposed by Grandjean (1936), with *Oribata nervosa* Berlese, 1914 as type species. The nominate subgenus comprises more than 180 species having a cosmopolitan distribution collectively (Subías 2022, online version 2024). The generic and subgeneric diagnoses were revised by Ermilov and Klimov (2017). An identification key to the Neotropical species of *Pergalumna* has been presented by Ermilov and Starý (2021).

Prior this study, two species of Galumnidae have been reported in the oribatid fauna of Guatemala, *Allogalumna microporosa* Mahunka, 1978 and *Neopilizetes rugifrons* (Stoll, 1893).

MATERIAL AND METHODS

Material – Samples were collected from five locations in Eastern Guatemala: 1 – Zacapa Department, 6.3 km NE Highway, sifting dry leaf litter, 8.VII.1986 (J.M. Campbell); 2 – Zacapa Department, San Lorenzo 4 mi. N, sifted mushroom piles, 18.VII.1986 (J.M. Campbell); 3 – Zacapa Department, Sierra de Las Minas, San Lorenzo, 1700 m a.s.l., lichens and moss mats on rocks, 7–10.XI.1986 (E.E. Lindquist); 4 – Zacapa Department, Sierra de Las Minas, 9 km N. San Lorenzo,

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2100 m a.s.l., damp litter in cloud forest, 17.XI.1986 (E.E. Lindquist); 5 – Izabal Department, Las Escobar, 8 km SW Puerto Barrios, rainforest litter, 12–14.XI.1986 (E.E. Lindquist).

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 (behind pteromorphs); setal lengths were measured perpendicular to their long axes, accounting for curvature. 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.

Terminology **–** Morphological terminology used in this paper mostly follows that of Grandjean (1956, 1957), Norton and Ermilov (2017) and Ermilov *et al*. (2023); also, Ermilov and Klimov (2017) for overview.

Abbreviations **–** The following morphological abbreviations are used: *Prodorsum*: *L* = lamellar line; *S* = sublamellar line; *N* = prodorsal leg niche; *E*, *T* = lateral ridges; *ro*, *le*, *in*, *bs* = rostral, lamellar, interlamellar, and bothridial setae, respectively; *Ad* = dorsosejugal porose area; *D* = dorsophragma; *P* = pleurophragma. *Notogaster*: *Aa*, *A1*, *A3* = porose areas; *c*, *la*, *lm*, *lp*, *h*, *p* = setae; *ia*, *im*, *ip*, *ih*, *ips* = lyrifissures; *gla* = opisthonotal gland opening. *Gnathosoma*: *a*, *m*, *h* = subcapitular setae; *or* = adoral seta; *sup*, *inf*, *d*, *l*, *cm*, *acm*, *ul*, *su*, *vt*, *lt* = palp setae; ω = palp solenidion; *as* = axillary saccule; *cha*, *chb* = cheliceral setae; *Tg* = Trägårdh's organ. *Epimeral and lateral podosomal regions*: *1a*, *3b*, *3c*, *4a*, *4b*, *4c* = epimeral setae; *PdI*, *PdII* = pedotecta I, II, respectively; *dis* = discidium; *cir* = circumpedal carina. *Anogenital region*: *g*, *ag*, *an*, *ad* = genital, aggenital, anal, and adanal setae, respectively; *iad* = adanal lyrifissure; *po* = preanal organ. *Legs*: *Tr*, *Fe*, *Ge*, *Ti*, *Ta* = trochanter, femur, genu, tibia, and tarsus, respectively; ω, φ, σ = solenidia; ε = famulus; *d*, *l*, *v*, *bv*, *ev*, *ft*, *tc*, *it*, *p*, *u*, *a*, *s*, *pv*, *pl* = setae; *pa* = porose area.

LIST OF TAXA

Distribution mostly from Subías (2022, online version 2024). Ptyctimous mites and some Damaeidae are not included.

Brachychthoniidae

Liochthonius fimbriatissimus Hammer, 1962: location 4 (1 ex.). Distribution: Australasian, Neotropical, Antarctic.

Sphaerochthoniidae

Sphaerochthonius splendidus (Berlese, 1904): location 1 (7 ex.). Distribution: Tropical, Subtropical.

Hypochthoniidae

Eohypochthonius crassisetiger Aoki, 1959: location 5 (2 ex.). Distribution: Southern Palaearctic, Australasian, Neotropical.

Eohypochthonius gracilis (Jacot, 1936): location 5 (1 ex.). Distribution: Tropical, Subtropical.

Epilohmanniidae

Epilohmannia minuta Berlese, 1920: location 5 (2 ex.). Distribution: Tropical, Central and Eastern U.S.A.

Epilohmannoides (*Neoepilohmannoides*) *xena* (Mahunka, 1983): location 5 (1 ex.). Distribution: Northern Neotropical, Vietnam, Iran.

Trhypochthoniidae

Allonothrus tuxtlasensis Palacios-Vargas & Iglesias, 1997: location 5 (1 ex.). Distribution: Northern Neotropical.
Archegozetes magnus (Sellnick, 1925): location 5 (47 ex.). Distribution: Tropical, Subtropical.
Trhypochthonius tectorum (Berlese, 1896): location 3 (13 ex.). Distribution: Semicosmopolitan.

Malaconothridae

Malaconothrus aureopunctatus Hammer, 1979: location 4 (2 ex.). Distribution: Oriental, Brazil, Ethiopia.

Nothridae

Nothrus anauniensis Canestrini & Fanzago, 1877: location 3 (1 ex.). Distribution: Cosmopolitan.
Nothrus willmanni Mahunka, 1983: location 4 (7 ex.). Distribution: Neotropical.

Nanhermanniidae

Nanhermannia elegantissima Hammer, 1958: location 4 (4 ex.). Distribution: Neotropical, Subantarctic.

Hermanniellidae

Hermanniella sp.: 4 (7 ex.).
Sacculobates horologiorum Grandjean, 1962: location 5 (4 ex.). Distribution: Neotropical.

Plasmobatidae

Plasmobates cribratus Grandjean, 1929: location 5 (4 ex.). Distribution: Neotropical.

Licnodamaeidae

Licnodamaeus sp.: location 3 (1 ex.).

Pheroliodidae

Pheroliodes wehnckei (Willmann, 1930): location 3 (3 ex.). Distribution: Neotropical.

Gymnodamaeidae

Jacotella ornata (Balogh & Csiszár, 1963): location 3 (2 ex.). Distribution: Neotropical, India.

Damaeidae

Epidamaeus sp.: location 3 (1 ex.).

Cepheusidae

Oribatodes mirabilis Banks, 1895: location 4 (1 ex.). Distribution: Northern Nearctic.

Polypterozetidae

Polypterozetes cherubin Berlese 1916: location 4 (9 ex.). Distribution: Italy.

Basilobelbidae

Basilobelba werneri Mahunka, 1982: locations 4 (18 ex.), 5 (4 ex.). Distribution: Northern

Neotropical.

Eremaeidae

Eueremaeus sp.: location 3 (1 ex.).

Astegistidae

Cultroribula bicuspidata Mahunka, 1978: location 5 (5 ex.). Distribution: Tropical, Subtropical.
Furcoppia sp.: location 5 (2 ex.).

Peloppiidae

Ceratorchestes cf. *baloghi* Mahunka, 1983: locations 1 (1 ex.), 5 (1 ex.). Distribution: Northern Neotropical.
Metrioppia serrata (Sellnick, 1931): location 4 (14 ex.). Distribution: Mexico, U.S.A. (Virginia).

Eremulidae

Eremulus brasiliensis Pérez-Íñigo & Baggio, 1985: locations 1 (2 ex.), 3 (5 ex.), 4 (9 ex.), 5 (5 ex.). Distribution: Neotropical.

Damaeolidae

Fosseremus laciniatus (Berlese, 1905): location 4 (1 ex.). Distribution: Cosmopolitan.

Oppiidae

Amboroppia (*Quintanoppia*) *guatemalaensis* Ermilov, 2024: location 4 (7 ex.). Distribution: Guatemala.
Amboroppia (*Quintanoppia*) *zacapaensis* Ermilov, 2024: location 4 (4 ex.). Distribution: Guatemala.
Arcoppia dechambrierorum (Mahunka, 1983): location 5 (9 ex.). Distribution: Northern Neotropical.
Arcoppia tumulosa Ermilov, 2024: locations 1 (1 ex.), 4 (4 ex.). Distribution: Guatemala.
Arcoppia sp.: 5 (12 ex.).
Mimoppia (*Dysarcoppia*) *dendropectinata* (Woas, 1986): location 5 (18 ex.). Distribution: El Salvador.
Neoamerioppia sp.: location 4 (1 ex.).
Oppiella nova (Oudemans, 1902): locations 1 (1 ex.), 4 (2 ex.). Distribution: Cosmopolitan.
Pararamusella cf. *disjuncta* Mahunka & Palacios-Vargas, 1998: location 4 (16 ex.). Distribution: Mexico. Remarks. Our specimens are similar to those from the original description (Mahunka & Palacios-Vargas, 1998), but they have narrowed (nearly pointed) rostrum.
Pseudoamerioppia barrancensis (Hammer, 1961): location 1 (18 ex.). Distribution: Neotropical, Philippines, western Africa, Canary Islands.
Ramusella (*Ramusella*) *chulumaniensis* (Hammer, 1958): locations 4 (1 ex.), 5 (2 ex.). Distribution: Neotropical, Oriental.
Ramusella (*Insculptoppia*) *claudelionsi* (Călugăr & Vasiliu, 1983): location 4 (1 ex.). Distribution: Cuba.
Wallworkoppia cervifer (Mahunka, 1983): locations 4 (1 ex.), 5 (3 ex.). Distribution: Northern Neotropical.

Sternoppiidae

Sternoppia incisa Balogh & Mahunka, 1977: locations 4 (5 ex.), 5 (9 ex.). Distribution: Neotropical.

Quadroppiidae

Quadroppia (*Coronoquadroppia*) *circumita* (Hammer, 1961): location 5 (1 ex.). Distribution: Tropical, Subtropical.

Suctobelbidae

Allosuctobelba sp.: location 4 (3 ex.).
Suctobelbella (*Suctobelbella*) *subcornigera maculata* Shtanchaeva & Subías, 2009: locations 4 (1 ex.), 5 (1 ex.). Distribution: Holarctic, Nearctic, Argentina.
Suctobelbella (*Suctobelbella*) *perdentata* (Hammer, 1961): location 5 (1 ex.). Distribution: Neotropical.
Suctobelbella (*Flagrosuctobelba*) *crassisetosa* Ermilov, 2024: location 5 (1 ex.). Distribution: Mexico.
Suctobelbella (*Flagrosuctobelba*) *forsslundi* (Strenzke, 1950): location 4 (3 ex.). Distribution: Palaearctic, Cuba.
Suctobelbila tetrasetosa Ermilov, 2024: location 5 (1 ex.). Distribution: Mexico.

Dampfiellidae

Beckiella sp.: location 4 (1 ex.).

Otocepheidae

Cavernocepheus longicristatus Ermilov, 2024: location 4 (9 ex.). Distribution: Guatemala.
Cavernocepheus undulatus P. Balogh, 2002: location 5 (1 ex.). Distribution: Central America.

Carabodidae

Carabodes (*Carabodes*) *guatemalaensis* Ermilov, 2023: locations 1 (3 ex.), 4 (3 ex.). Distribution: Guatemala.
Carabodes (*Klapperiches*) *lindquisti* Ermilov, 2023: location 3 (9 ex.). Distribution: Guatemala.
Carabodes (*Klapperiches*) *venezolanus* Subías & Arillo, 2004: locations 3 (17 ex.), 5 (1 ex.). Distribution: Neotropical.
Costacarabodes turrialbai Fernández, Theron, Leiva & Jordaan, 2018: location 5 (4 ex.). Distribution: Neotropical.
Gymnobodes minimus Ermilov, 2016: location 5 (3 ex.). Distribution: Cuba.

Tectocepheidae

Tectocepheus sarekensis Trägårdh, 1910: locations 1 (2 ex.), 4 (4 ex.). Distribution: Cosmopolitan.
Tectocepheus velatus (Michael, 1880): locations 2 (1 ex.), 4 (1 ex.). Distribution: Cosmopolitan.

Microtegeidae

Microtegeus borhidii Balogh & Mahunka, 1974: locations 1 (1 ex.), 4 (2 ex.), 5 (6 ex.). Distribution: Neotropical, Oriental, Japan.

Phenopelopidae

Eupelops acromios (Hermann, 1804): location 5 (1 ex.). Distribution: Semicosmopolitan.

Microzetidae

Protozetes janosbaloghi Ermilov, 2024: locations 4 (3 ex.), 5 (4 ex.). Distribution: Guatemala.

Schalleria mexicana Mahunka & Palacios-Vargas, 1996: location 5 (1 ex.). Distribution: Mexico.

Epactozetidae

Truncozetes sp.: location 5 (5 ex.).

Oribatellidae

Oribatella dechambrieri Mahunka, 1983: location 4 (6 ex.). Distribution: Northern Neotropical.
Oribatella sp. A: location 4 (1 ex.).
Oribatella sp. B: location 5 (15 ex.).
Oribatella sp. C: location 5 (3 ex.).

Ceratozetidae

Ceratozetes mediocris Berlese, 1908: location 4 (4 ex.). Distribution: Semicosmopolitan.
Fuscozetes fuscipes (Koch, 1844): location 1 (6 ex.). Distribution: Holarctic, Costa Rica, Vietnam.

Punctoribatidae

Lamellobates molecula (Berlese, 1916): locations 1 (44 ex.), 2 (1 ex.). Distribution: Tropical, Subtropical.

Mochlozetidae

Dynatozetes magnus (Banks, 1895): locations 4 (3 ex.), 5 (3 ex.). Distribution: Nearctic, Ecuador.

Scheloribatidae

Scheloribates cf. *elegans* Hammer, 1958: locations 1 (4 ex.), 3 (5 ex.), 4 (19 ex.). Distribution: Neotropical, Oriental, Hawaii.
Scheloribates laevigatus (Koch, 1835): location 1 (1 ex.). Distribution: Semicosmopolitan.
Scheloribates pallidulus (Koch, 1841): locations 1 (1 ex.), 5 (7 ex.). Distribution: Semicosmopolitan.
Scheloribates praeincisus (Berlese, 1910): locations 1 (6 ex.), 2 (1 ex.), 3 (1 ex.). Distribution: Oriental, Australasian, Afrotropical, Neotropical, Southern Holarctic.
Scheloribates (*Bischeloribates*) sp.: location 3 (1 ex.).
Scheloribates (*Perscheloribates*) *mexicoensis* Ermilov & Kontschán, 2023: location 5 (1 ex.). Distribution: Mexico.
Scheloribates (*Perscheloribates*) *minusculus* Hammer, 1961: locations 3 (1 ex.), 5 (1 ex.). Distribution: Neotropical.
Scheloribates (*Topobates*) sp.: location 5 (2 ex.).

Oripodidae

Oripoda elongata Banks & Pergande, 1904: location 3 (1 ex.). Distribution: U.S.A., Mexico.

Haplozetidae

Peloribates longisetosus (Willmann, 1930): locations 1 (2 ex.), 3 (10 ex.). Distribution: Neotropical, eastern Palaearctic, India.
Protoribates capucinus Berlese, 1908: location 5 (3 ex.). Distribution: Cosmopolitan.
Protoribates paracapucinus (Mahunka, 1988): location 1 (1 ex.). Distribution: Tropical and Subtropical.
Protoribates sp.: location 4 (5 ex.).
Setoxylobates palaciosvargasi Ermilov & Kontschán, 2023: location 5 (21 ex.). Distribution: Mexico.

Rostrozetes ovulum (Berlese, 1908): locations 1 (6 ex.), 4 (1 ex.), 5 (9 ex.). Distribution: Tropical and Subtropical.

Galumnidae

Galumna flabellifera Hammer, 1958: location 1 (6 ex.). Distribution: Tropical and Subtropical.
Galumna laselvae P. Balogh, 1997: location 1 (1 ex.). Distribution: Neotropical.
Galumna sp.: location 1 (1 ex.).
Pergalumna horvathorum P. Balogh, 1997: location 5 (12 ex.). Distribution: Northern Neotropical.
Pergalumna paraboliviana Ermilov & Gwiazdowicz, 2015: location 4 (39 ex.). Distribution: Peru.
Pergalumna paraobsidiana **sp. nov.**: location 5 (6 ex.).
Pergalumna sp.: locations 1 (1 ex.), 4 (3 ex.).
Trichogalumna nipponica (Aoki, 1966): location 4 (3 ex.). Distribution: Semicosmopolitan.

Galumnellidae

Galumnopsis holoscripta Grandjean, 1931: location 5 (2 ex.). Distribution: Neotropical.

The list includes 98 species belonging to 68 genera and 43 families. Of the 79 species (except one new species and 18 unidentified species), seven species are known only from Guatemala, one is Nearctic, one is European, 31 are Neotropical, and 27 (including 12 Cosmopolitan/Semicosmopolitan species) have broad distributions (more than one geographical region). Except *Nothrus willmanni*, *Sacculobates horologiorum*, *Peloribates longisetosus*, 18 unidentified species and the seven Guatemalan species, the other species (70) are recorded for the first time in Guatemala.

TAXONOMY

Family Galumnidae
Pergalumna Grandjean, 1936
Subgenus *Pergalumna* (*Pergalumna*) Grandjean, 1936

Type species: *Oribata nervosa* Berlese, 1914

Pergalumna paraobsidiana sp. nov. (Figs. 1–12)

http://zoobank.org/urn:lsid:zoobank.org:act:2128D02D-CAA8-4DEF-8CF8-7AECB8779CF7

Type material

Holotype (male) and five paratypes (two males and three females): Eastern Guatemala, Izabal Department, Las Escobar, 8 km SW Puerto Barrios, rainforest litter, 12–14.XI.1986 (E.E. Lindquist).

Type deposition

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

Diagnosis

Body length: 525–570. Prodorsum, pteromorph, ventral plate, and posterior part of notogaster densely tuberculate; anterior and central parts of notogaster with dense short longitudinal ridges. Rostrum pointed. Rostral, lamellar and interlamellar setae long, setiform, barbed; relative length: *in*>*le*>*ro*; bothridial seta long, setiform, unilaterally shortly ciliate. Dorsosejugal porose area present.

Dorsosejugal suture present but indistinct. Three pairs of porose areas present: *Aa* and *A3* oval; *A1* elongate oval; *Aa* located between *la* and *lm*, closer and anteromedially to *la*. Median pore absent. Circumpedal carina directed to insertion of seta *3b*. Epimeral and anogenital setae comparatively short. Postanal porose area absent. Leg famulus curved mediodistally, directed forwards, inserted between solenidia ω_1 and ω_2; solenidion on tibia IV with well-developed swollen mediobasal part, inserted in posterior part of the segment.

Description

Measurements – Body length: 540 (holotype), 525–570 (paratypes); notogaster width: 405 (holotype), 375–420 (paratypes). No differences between males and females in body size.

Integument – Body color brown. Body surface densely microgranulate sculpturing; additionally, prodorsum, pteromorph, ventral plate (including subcapitular mentum and genital and anal plates), and posterior part of notogaster densely tuberculate; anterior and central parts of notogaster with dense short longitudinal ridges.

Prodorsum – Rostrum pointed. Lamellar and sublamellar lines thin, parallel, curving backwards mediodistally. Rostral (67–75), lamellar (97–105) and interlamellar (124–127) setae setiform, barbed; *le* removed from *L*; bothridial seta (153–161) setiform, unilaterally shortly ciliate. Dorsosejugal porose area elongate oval (15–19 × 5), located posterolaterally to insertion of *in*. Dorsophragma comparatively long.

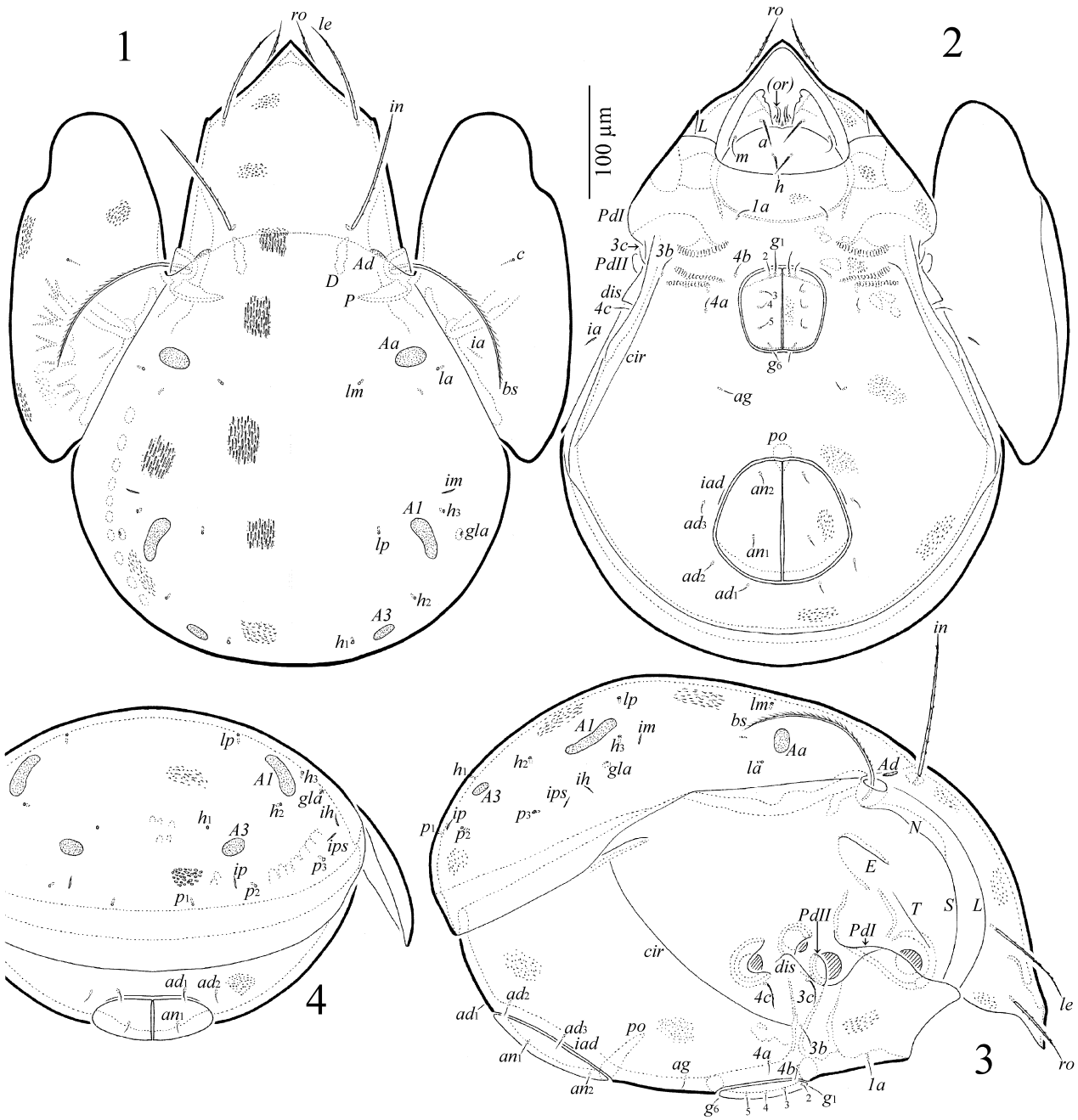
Notogaster – Dorsosejugal suture present but indistinct. All notogastral setae represented by setal alveoli. Three pairs of porose areas developed; *Aa* (30–37 × 15–19) and *A3* (22–30 × 15–19) oval; *A1* (45–60 × 15–19) elongate oval; *Aa* located between *la* and *lm*, closer and anteromedially to *la*. Median pore absent. Opisthonotal gland opening and all lyrifissures distinct: *gla* located laterally to *A1*; *im* anterolaterally to *A1*; *ip* between p_1 and p_2, closer to p_2; *ih* and *ips* close to each other, anteriorly to p_3.

Gnathosoma – Size of subcapitulum: 139–142 × 120–124; subcapitular (*a*, *h*: 28–30; *m*: 30–34) and adoral (15–17) setae setiform, barbed. Length of palp: 105–112; setation: 0–2–1–3–9(+ω); postpalpal seta (5) spiniform, smooth. Length of chelicera: 187–191; setae (*cha*: 52–56; *chb*: 37–39) setiform, barbed.

Epimeral and lateral podosomal regions – Epimeral setal formula: 1–0–2–3; setae (*4a*, *4b*: 11; *1b*: 17–19; *3b*: 22–26; *3c*, *4c*: 30–34) setiform, smooth. Circumpedal carina medium-sized, directed to insertion of seta *3b*.

Anogenital region – Anogenital formula: 6–1–2–3; genital (g_1: 17–19; others: 11), aggenital (11), anal (11), and adanal (11) setae setiform, roughened; anterior edge of genital plate with two setae; aggenital seta located between genital and anal apertures, slightly closer to the former; adanal setae ad_1 and ad_2 posteriorly, ad_3 laterally to anal plate; distance ad_1–ad_2 shorter than ad_2–ad_3. Adanal lyrifissure located close and parallel to anal plate. Postanal porose area absent.

Legs – Median claw distinctly thicker than lateral claws; all claws slightly barbed on dorsal side. Porose area on femora I–IV and on trochanters III, IV poorly visible; proximoventral porose area on tarsi and distoventral porose area on tibiae not observable. Formulas of leg setation and solenidia: I (1–4–3–4–20) [1–2–2], II (1–4–3–4–15) [1–1–2], III (1–2–1–3–15) [1–1–0], IV (1–2–2–3–12) [0–1–0]; homology of setae and solenidia indicated in Table 1; famulus curved mediodistally, directed forwards, inserted between solenidia ω_1 and ω_2; solenidion on tibia IV with well-developed swollen mediobasal part, inserted in posterior part of the segment.

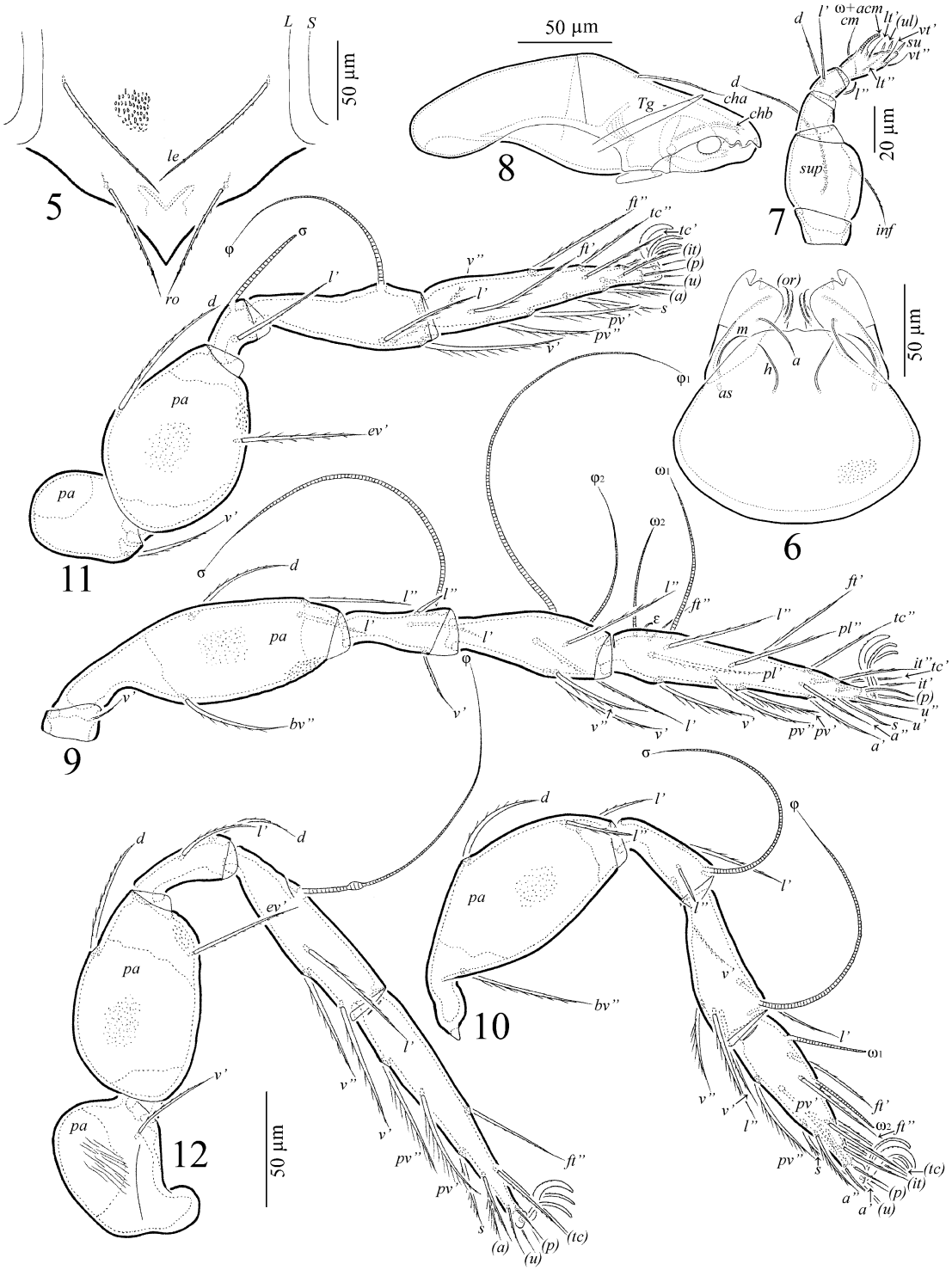


Figures 1–4. *Pergalumna paraobsidiana* **sp. nov.** (adult) – 1. Dorsal view of body; 2. Ventral view of body (legs and right pteromorph not shown); 3. Right lateral view of body (gnathosoma, legs and right pteromorph not shown); 4. Posterior view of body (part of left half not shown).

Table 1. Leg setation and solenidia of adult *Pergalumna paraobsidiana* **sp. nov.**

Leg	*Tr*	*Fe*	*Ge*	*Ti*	*Ta*
I	*v'*	*d, (l), bv"*	*(l), v', σ*	*(l), (v), φ₁, φ₂*	*(ft), (tc), (it), (p), (u), (a), s, (pv), v', (pl), l", ε, ω₁, ω₂*
II	*v'*	*d, (l), bv"*	*(l), v', σ*	*(l), (v), φ*	*(ft), (tc), (it), (p), (u), (a), s, (pv), ω₁, ω₂*
III	*v'*	*d, ev'*	*l', σ*	*l', (v), φ*	*(ft), (tc), (it), (p), (u), (a), s, (pv)*
IV	*v'*	*d, ev'*	*d, l'*	*l', (v), φ*	*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 setae on the anterior and double quotation mark (") setae on the posterior side of a given leg segment; parentheses refer to a pair of setae.



Figures 5–12. *Pergalumna paraobsidiana* **sp. nov.** (adult) – 5. Anterior view of prodorsum, dorsoanterior view; 6. Subcapitulum, ventral view; 7. Palp, left, paraxial view; 8. Chelicera, left, paraxial view; 9. Leg I, right, antiaxial view; 10. Leg II (trochanter not shown), right, antiaxial view; 11. Leg III, left, antiaxial view; 12. Leg IV, left, antiaxial view.

Comparison

Pergalumna obsidiana **sp. nov.** is most similar to *P. obsidiana* Palacios-Vargas & Villagómez, 2017 and *P. ekaterinae* Páez, Villagómez & Palacios-Vargas, 2019 from Mexico in the following main traits: rostrum pointed; bothridial seta long, setiform, shortly ciliate; rostral, lamellar and

interlamellar setae long; solenidion of the leg tibia IV with mediobasal swollen part.

The new species differs from *P. obsidiana* by the following traits: body size larger (length: 525–570 versus 443–513); anterior and central parts of notogaster with dense short longitudinal ridges (versus tuberculate); genital plate tuberculate (versus with strong transverse ridges); and rostral region without longitudinal ridge (versus with ridge).

The new species differs from *P. ekaterinae* by the following traits: body size larger (length: 525–570 versus 434–503); prodorsum, pteromorph, ventral plate, and posterior part of notogaster densely tuberculate, and anterior and central parts of notogaster with dense short longitudinal ridges (versus surface without heavy sculpturing); notogaster with three pairs (versus four pairs) of notogastral porose areas; posterior part of notogaster without striate bands (versus with bands).

Etymology

The species name *paraobsidiana* refers to the similarity between the new species and *P. obsidiana*.

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موارد اضافه شده به فون هرناهای اوریباتید (Acari, Oribatida) گواتمالا، همراه با توصیف گونهٔ جدیدی از *Pergalumna*

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چکیده

مطالعه حاضر بر اساس نمونه‌های هرناهای اوریباتید جمع‌آوری شده از پنج مکان در شرق گواتمالا است. فهرستی از ۹۸ گونه، متعلق به ٦٨ جنس و ٤٣ خانواده، ارایه شده است؛ ۷۰ گونه برای نخستین بار برای فون گواتمالا ثبت شده است. گونهٔ جدیدی از جنس *Pergalumna*، *P. paraobsidiana* **sp. nov.** از بستر جنگل‌های بارانی توصیف می‌شود.

واژگان کلیدی: آمریکای مرکزی، فون، کنه‌های گالومنید، ریخت‌شناسی، گزارش جدید، گونهٔ جدید، آرایه‌شناسی.

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