A NEW SPECIES OF GALUMNA (NEOGALUMNA) (ACARI, ORIBATIDA, GALUMNIDAE) FROM THE PHILIPPINES

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ABSTRACT: One new species of Galumna (Neogalumna) (Oribatida, Galumnidae)—Galumna (Neogalumna) eusebioi sp. n.—is described from the Mount Guiting-guiting Natural Park, Sibuyan Island, Philippines. This species differs from all other known species of the subgenus in the presence of two (vs. one) pairs of notogastral porose areas Aa.

KEY WORDS: Mites, taxonomy, morphology, Oriental region.

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INTRODUCTION

Our paper describes and illustrates one new oribatid mite (Acari Oribatida) species of the genus Galumna Heyden, 1826 (Galumnidae), subgenus G. (Neogalumna) Hammer, 1973, collected from the Philippines.

The subgenus Galumna (Neogalumna) was described by Hammer (1973) as an independent genus, with Neogalumna antenniger Hammer, 1973 as type species. At present, it comprises 14 species, which are distributed collectively in the Afro-tropical, Neotropical and Oriental regions, Samoa and China (Ermilov and Khaustov 2021). The subgeneric diagnosis has been presented by Ermilov and Klimov (2017). An identification key to known species of Galumna (Neogalumna) was provided by Ermilov and Khaustov (2021).

So far, one species of Galumna (Neogalumna) has been registered in the Philippines ( Corpuz-Raros and Ermilov 2019): G. (N.) tolstikovi Ermilov and Anichkin, 2014.

MATERIALS AND METHODS

Observation and documentation. Specimens were mounted in lactic acid, on temporary cavity slides for measurement and illustration. 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 of the notogaster in dorsal view (behind pteromorph). Lengths of body setae were measured in lateral aspect. All body measurements are presented in micrometers (µm). 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 transmission light microscope “Leica DM 2500”.

Terminology. Morphological terminology used in this paper follows that of Grandjean (see Ermilov and Klimov 2017 for review and application).

Abbreviations. Prodorsum: L—lamellar line; S—sublamellar line; N—prodorsal leg niche; E, T—lateral ridges of prodorsum; ro, le, in, bs—rostral, lamellar, interlamellar, and bothridial seta, respectively; Ad—dorsosejugal porose area; D—dorsophragma; P—pleurophragma. Notogaster: c, la, lm, lp, h, p—notogastral setal alveoli; Aa, Aam, A1, A2, A3—notogastral porose areas; ia, im, ip, ih, ips—lyrifissures; gla—opisthonotal gland opening. Epimeral and lateral podosomal regions: 1a, 3b, 4a, 4b—epimeral setae; PdI, PdII—pedotectum I, II, respectively; dis—discidium; cir—circumpedal carina. Anogenital region: g, ag, an, ad—genital, aggenital, anal, and adanal seta, respectively; iad—adanal lyrifissure; p.o.—preanal organ; Ap—postanal porose area.

SYSTEMATICS

Galumna (Neogalumna) eusebioi Ermilov and Corpuz-Raros, sp.n.

Figs. 1–4

Diagnosis. Body length: 398. Lamellar line incomplete, straight, thickened. Rostral seta medium-sized, slightly barbed; lamellar seta short, thinner than ro, slightly barbed; interlamellar seta...
minute, needleform; bothridial seta long, setiform, shortly ciliate unilaterally. Dorsosejugal and post-anal porose area present, oval. Notogaster with five pairs of small, rounded porose areas, $Aa$ divided into two areas. Setal alveolus $la$ absent; additional setal alveolus $c$ present anteromedial to $Aam$. Median pore absent. Epimeral and anogenital setae short, needleform. Circumpedal carina medium-sized. Leg solenidion on tibia IV inserted in the middle of the segment.


Prodorsum. Rostrum slightly protruding, rounded. Lamellar line incomplete, straight, thick-

Notogastron. Dorsosejugal suture complete, convex medially. With 10 pairs of setal alveoli and five pairs of rounded porose areas (10–12); porose area Aa divided into two areas Aa1 and Aa2, both located close to pteromorphal hinge; distance A1–A2 equal to A2–A3; la absent but additional setal alveolus c4 developed and located anteromedial to Aam. Median pore absent. Opisthonautal gland opening and all lyrifissures distinct: gla located posterolateral to A2 and removed from it; im between lm and A1; ip between p1 and p2, nearer to p1; ih and ips close to each other, between p2 and p3.


Epimeral and lateral podosomal regions. Anterior tectum of epimere I smooth. Epimeral setal formula: 1–0–1–2. All epimeral setae (1a, 3b: 10–12; 4a, 4b: 6–8) needleform. Circumpedal carina medium-sized, directed to setal alveolus 3b but clearly not reaching it.

Anogenital region. Genital (g1: 10–12; g2–g6: 6–8), aggenital (6–8), anal (10–12), and adanal (10–12) setae needleform. Anterior edge of genital plate with two setae. Aggenital seta located between genital and anal apertures, equally removed from them. Adanal setae ad1 and ad2, posterior, ad1 lateral to anal plate; distance ad2–ad1 clearly shorter than ad2–ad2. Adanal lyrifissure oblique, distant from anal plate, located anterolateral to ad1. Unpaired postanal porose area (14–16 × 8) oval.

Legs. Similar to other species of Galumna (Neogalumna) (e.g., Ermilov and Khaustov 2021; Ermilov et al. 2021). Median claw distinctly thicker than lateral claws, all roughened on dorsal side. Porose area on all femora and on trochanters III, IV present, but poorly visible. 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 inserted between solenidia ω1 and ω2. Solenidion on tibia IV inserted in the middle of the segment.


Type deposition. The holotype and two paratypes (preserved in 70% solution of ethanol with a drop of glycerol) are deposited in the collection of the Tyumen State University Museum of Zoology, Tyumen, Russia.

Etymology. The species name is dedicated to our Philippine colleague, long-time UP Ultrab Museum Technician and research assistant, Orlando L. Eusebio, who collected the new species.

Remarks. Galumna (Neogalumna) eusebioi sp.n. is morphologically most similar to G. (N.) tolstikovi Ermilov and Anichkin, 2014 from the Oriental region (see Ermilov and Anichkin 2014) and G. (N.) specifica Ermilov, Sandmann, Klarn, Widyastuti and Scheu, 2015 from Indonesia (see Ermilov et al. 2015) in the following: setiform bothridial seta, straight lamellar line, short interlamellar seta, rounded notogastral porose areas, presence of postanal porose area, absence of median pore. However, the new species differs from the two species above in the presence of two pairs (vs. one) of notogastral porose areas Aa. Also, G. (N.) tolstikovi is characterized by the presence (vs. absence) of notogastral setal alveolus la, striate (vs. with one strong strium) genital plate, and rostral and lamellar setae equal in length (vs. rostral seta distinctly longer than lamellar seta). G. (N.) specifica is characterized by larger body size (498–531 × 348–365 vs. 398 × 265–332), longer and barbed (vs. minute and smooth) interlamellar seta, narrowly elongate oval (vs. oval) postanal porose area; striate (vs. not striate) subcapitular mentum and striate (vs. with one strong strium) genital plate.
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REFERENCES


Table 1

Leg setation and solenidia of adult Galumna (Neogalumna) eusebioi sp. n.

<table>
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<tr>
<td>I</td>
<td>v', d, (l), bv''</td>
<td>(l), v', σ</td>
<td>(l), (v), φ, ϕ₂</td>
<td>(f), (t), (i), (p), (u), (a), (s), (pv), v', (pl), l', ε, ω₁, ω₂</td>
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<tr>
<td>II</td>
<td>v', d, (l), bv''</td>
<td>(l), v', σ</td>
<td>(l), (v), φ</td>
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<td>III</td>
<td>v', d, ev'</td>
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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.