

A second species of the genus *Manodactylus* Moser, 1919 (Coleoptera, Scarabaeidae, Melolonthinae, Macroductylini) from the highlands of Colombia

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Academic editor: Matthias Seidel ♦ Received 17 January 2024 ♦ Accepted 29 May 2024 ♦ Published 30 July 2024

Abstract

Moser in 1919 described the genus *Manodactylus* for the new species *Manodactylus gaujoni* Moser, 1919, which was described based on specimens of Abbé Gaujon from Loja, Ecuador; a syntype of this species was designated in 2017 as the lectotype. Earlier, *Macroductylus gaujoni* was described by Ohaus in 1909 based on a specimen collected also in highlands of Loja; however, this type specimen is presumably lost. We designate the lectotype as a neotype for *Macroductylus gaujoni* Ohaus, 1909 based on the congruence between the type localities and the diagnostic characters mentioned in the descriptions. Thus, *Manodactylus gaujoni* Moser, 1919 is a junior objective synonym of *Macroductylus gaujoni* Ohaus, 1909, which is presented here in the new combination under the genus *Manodactylus*. Also, a second species of the genus *Manodactylus* is described from the Paramo ecosystem in the Andes of southern Colombia. *Manodactylus paramicola* sp. nov. differs from *M. gaujoni* by the shape of clypeus and punctuation of pronotum and elytra. Diagnosis for the genus and for the species, the description of *M. paramicola* sp. nov., and a distribution map are presented.

Key Words

distribution, new species, scarab, taxonomy

Introduction

Moser (1919) described the genus *Manodactylus*, as well as the unique and singular species currently placed in it. The description of *Manodactylus gaujoni* Moser, 1919 was based on an unspecified number of specimens from the southern Andes of Ecuador, in the province of Loja (Moser 1919; Katovich 2008). However, Ohaus (1909) already used the name *Macroductylus gaujoni* Ohaus, 1909 for a species in Loja with similar morphology and from a nearby locality of *Manodactylus gaujoni sensu* Moser (1919) (Fuhrmann and Vaz-de-Mello 2017). The original type series of *Macroductylus gaujoni* Ohaus (1909) has not been found yet, and this

taxonomic and nomenclatural problem is still waiting to be solved (Fuhrmann and Vaz-de-Mello 2017).

Since its description, the genus *Manodactylus* and the single described species remained little-known, and only one new record was presented from the department of Piura in Peru (Saavedra Albuquerque et al. 2015). This new record has not been confirmed until now and a previous study overlooked it (see Fuhrmann and Vaz-de-Mello 2017). In two studies on the tribe Macroductylini, the genus *Manodactylus* was found to be morphologically similar to the genera *Chariodactylus* Moser, 1919 and *Macroductylus* Dejean, 1821 (implied by the identification keys) (Katovich 2008; Fuhrmann and Vaz-de-Mello 2017).

Despite having been redescribed by Katovich (2008) and re-diagnosed by Fuhrmann and Vaz-de-Mello (2017), the generic limits of *Manodactylus* are still not well defined. Hence, we propose complementary characters to the diagnosis of the genus and designate a neotype for *M. gaujoni* Ohaus, 1909 in order to give nomenclatural stability to the species name; also, we describe a second species of *Manodactylus* from the southern Andes of Colombia, and provide a diagnosis for the single previously known species.

Materials and methods

Type specimens are deposited in the following institutions (curators in parenthesis):

- CEUN** Colección Entomológica de la Universidad de Nariño. Pasto, Nariño, Colombia (G. Castillo, M. Rodríguez).
CMNC Canadian Museum of Nature. Ottawa, Canada (R. Anderson, A. B. T. Smith, F. Génier).
IAvH-E Sección de Entomología, Colecciones Biológicas del Instituto de Investigación de Recursos Biológicos Alexander von Humboldt. Villa de Leyva, Boyacá, Colombia (J. C. Neita Moreno).
MFNB Museum für Naturkunde, Leibniz-Institut für Evolutions- und Biodiversitätsforschung. Berlin, Deutschland (J. Willers, B. Jaeger).

Measurements of the new species were taken using a Mitutoyo NTD12-6" M digital caliper. For transcription of type specimens' labels, a slash '/' indicates different lines, two slashes '//' indicate different labels, and label characteristics are presented between square brackets '['].

The photographs of habitus were taken with a Canon EOS 5D Mark II camera with a Canon EF 100 mm f/2.8 macro lens, and photographs of male genitalia, mouthparts, and morphological details were taken with a Leica S8APO stereomicroscope with a Leica MC190 HD camera. The distribution map is based on information from the type specimen's labels and literature (Ohaus 1909; Saavedra Albuquerque et al. 2015) and was made on the online software SimpleMappr (Shorthouse 2010). The plates were organized using Photoshop 21.2.0.

Results and discussion

Genus *Manodactylus* Moser, 1919

Type species. *Manodactylus gaujoni* Moser, 1919 (by monotypy, junior objective synonym of *Manodactylus gaujoni* (Ohaus, 1909), comb. nov.)

Diagnosis. Color black, shiny; clypeus trapezoidal; clypeus and frons forming a subpentagonal area, surface with small, coarse, rounded punctures densely and irregularly distributed giving a rugose appearance; frons with a

smooth raised narrow area extending from anterior angles to the vertex, and delimiting the subpentagonal area; eyes small, interocular distance more than six times the dorsal width of the eye; antennae with nine antennomeres; pronotum diamond shaped, strongly wider medially, wider than long, and borders with small, rounded punctures bearing setae of different length; limit between scutellar shield and mesoscutum not evident; elytral base wider than pronotal base; each elytron with five striae between suture and humeral callus, 10 in total, each with a regular row of small, rounded punctures; prosternum with two anterior, longitudinal sulci; metaventricle densely setose medially; femora subequal in length to their respective tibiae; tibiae shorter than their respective tarsi; tarsal claws bifid, and with an acute triangular tooth basally; protibia along the outer edge with two teeth distributed in the apical third; protibia gradually widening from base to apex but narrowing from the inner edge in the apical third, and lacking apical spur; abdomen with intersegmental membrane VII–VIII exposed; abdominal ventrites 2–5 densely setose medially, and ventrite 5 evidently longer than the others; pygidium vertical, strongly convex; phallobase cylindrical, around 2.5 times the length of parameres; parameres fused at the base, short, apically slightly downward curved and with apex rounded.

Taxonomic remarks. *Manodactylus* is very similar to *Chariodactylus* and *Macroductylus*, all three genera sharing the trapezoidal clypeus, antennae with nine antennomeres, pronotum strongly wider medially, mesoscutum–scutellar shield limit not evident, prosternum anteriorly with two longitudinal sulci, protibia with two teeth on the outer edge, absence of protibial spur, and internal area of metatarsomere 5 unarmed (Fuhrmann and Vaz-de-Mello 2017). *Manodactylus* also shares with *Macroductylus* the small eyes (interocular distance of more than five times the dorsal width of the eye), and with *Chariodactylus* the pronotum slightly wider than long and the protibia gradually widening from base to apex but narrowing from the inner edge in the apical third.

As suggested in a previous work, a cladistic analysis including these three genera is needed to confirm the validity of these taxa (Fuhrmann and Vaz-de-Mello 2017). However, we prefer to retain each of these genera as valid until this taxonomic issue will be resolved, and propose the following characters to distinguish *Manodactylus* from the other two genera (some of these characters were mentioned by Fuhrmann and Vaz-de-Mello 2017): small eyes (Fig. 5B, D) (large eyes in *Chariodactylus*, interocular distance of less than 3.5 times the dorsal width of the eye), pronotum glabrous (Fig. 5A, C) (setose in *Chariodactylus*) and wider than long (Fig. 5A, C) (longer than wide or as long as wide in *Macroductylus*), and protibia gradually widening from base to apex but narrowing from the inner edge in the apical third (Fig. 4A) (protibia widening near the base but narrowing from the inner edge around the middle of the length in *Macroductylus*).

We identified some other morphological features which are probably useful to distinguish *Manodactylus*

from the other genera, but we were unable to check them in other genera and species from outside of Colombia. Males of both species of *Manodactylus* have the inner angle of the protibia slightly projected downward (Fig. 4B) (kind of similar to the ‘polex’ of some Ochodaeidae species), which is not projected in *Macroductylus* species from Colombia. Also, males of *Manodactylus paramicola* sp. nov. have two mesotibial spurs (Fig. 4D) and one metatibial spur (Fig. 4E), while males of the Colombian species of *Macroductylus* only have two spurs in the apex of mesotibiae.

***Manodactylus gaujoni* (Ohaus, 1909), comb. nov.**

Figs 1, 5A, B

Macroductylus gaujoni Ohaus, 1909: 95 (original description).

Manodactylus gaujoni Moser, 1919: 44, new junior objective synonym.

Type material. *Manodactylus gaujoni* Moser, 1919: lectotype male (MFNB), examined on photos: “Equateur / Loja / Abbé Gaujon” [white printed label] // “LECTOTYPE / *Manodactylus* ♂ / *gaujoni* / Moser 1919 / des. J. Fuhrmann & / F.Z. Vaz.de.Mello. 2014” [red handwritten label]. Lectotype designated by Fuhrmann and Vaz-de-Mello, 2017. *Macroductylus gaujoni* Ohaus, 1909: lectotype male of *Manodactylus gaujoni* Moser, 1919

designated here as the neotype (see under Remarks), with the additional label “NEOTYPE / *Macroductylus gaujoni* / Ohaus, 1909 / Des: Clavijo-Bustos, Castro-Vargas & Neita Moreno, 2024” [red printed label].

Diagnosis. *Manodactylus gaujoni* shares with *M. paramicola* sp. nov. the overall appearance, black color, shiny, with bicolored legs; clypeus trapezoidal; clypeus and frons forming a subpentagonal area delimited in the frons by a smooth raised narrow area extending from anterior angles to the vertex; eyes small, interocular distance around six to seven times the dorsal width of the eye; pronotum with micropunctures when viewed under high magnification; and each elytron with five striae between suture and humeral callus, 10 in total, and the interstriae convex.

Manodactylus gaujoni can be distinguished from *M. paramicola* sp. nov. by the following characters: body of a more lustrous color, with femora and tarsi reddish-brown, but tibiae dark brown; clypeus only slightly emarginate medially, with borders on each side of medial emargination widely rounded and slightly upturned; the subpentagonal area formed by clypeus and frons flat; the pronotum also with small, rounded, setigerous punctures but only on the borders; each elytral stria shallow, with a regular row of small, rounded punctures distanced by 1–4 times one puncture diameter; interstriae only slightly convex.

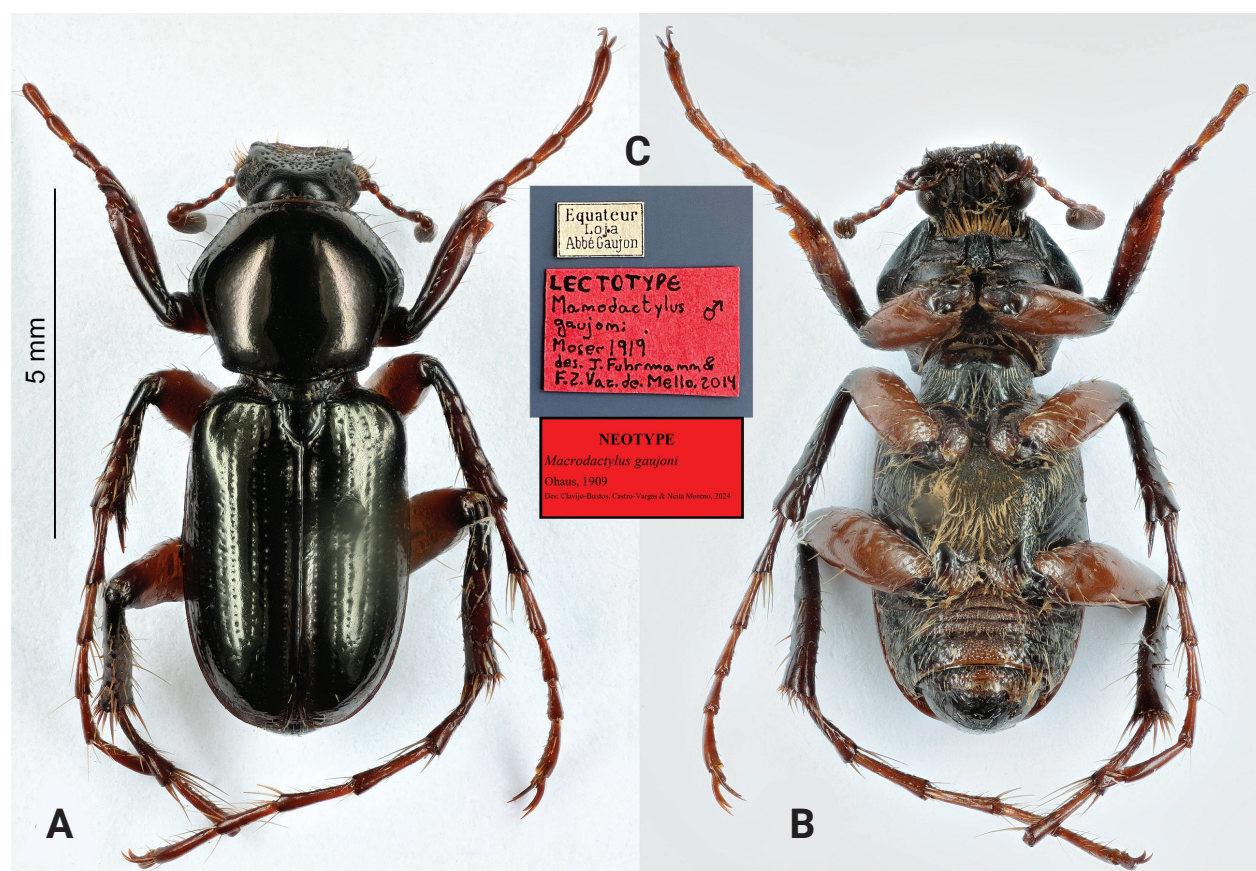


Figure 1. *Macroductylus gaujoni* Ohaus, 1909, male neotype = *Manodactylus gaujoni* Moser, 1919, male lectotype. A. Dorsal view; B. Ventral view; C. Labels.

Remarks. Ohaus (1909: 95) in the brief description of *Macroductylus gaujoni* mentioned that many specimens of Abbé Gaujon from Loja (Ecuador) that were sent to Europe, were collected by the Ecuadorian native Angelo Ordoñez (referred as Angelo Ordonnez by Ohaus, 1909: 95). Ohaus also contacted Angelo Ordoñez and when they both were going to Angelo's house in Loja, Ohaus collected a black specimen of '*Macroductylus*' with long red legs, which he named *Macroductylus gaujoni*. On the other hand, Moser (1919: 44) described the new genus *Manodactylus* declaring it to be similar to *Macroductylus* and with the type species *Manodactylus gaujoni*, whose description was based on specimens of Abbé Gaujon also from Loja. According to Moser (1919), *Manodactylus gaujoni* is characterized by being black with red or reddish-brown femora and tarsi, diagnostic characters that are also visible in the lectotype of *Manodactylus gaujoni* Moser, 1919 (Fig. 1). So far, the type specimen of *Macroductylus gaujoni* Ohaus, 1909 has not been found (Fuhrmann and Vaz-de-Mello 2017) and is presumably lost.

Therefore, we here designate the male lectotype of *Manodactylus gaujoni* Moser, 1919 as the neotype for *Macroductylus gaujoni* Ohaus, 1909. Our proposal is based on the congruence between the type locality of both species, the fact that the Ecuadorian Angelo Ordoñez was presumably involved in the collecting of both type specimens, and the diagnostic color pattern of the specimens mentioned in both descriptions. This will give stability to the species name making both taxa objective synonyms, with *Macroductylus gaujoni* Ohaus, 1909 as the senior synonym. *Macroductylus gaujoni* Ohaus, 1909 is transferred to the genus *Manodactylus*.

It is important to mention that the male paralectotype deposited in SDEI (Senckenberg Deutsches Entomologisches Institut. Müncheberg, Germany) has an Ohaus' label "*Macroductylus Gaujoni* / Cotype Moser", but also has another label indicating that it belongs to Abbé Gaujon's specimens (as the lectotype and other paralectotypes of *Manodactylus gaujoni* from Moser) (Fuhrmann and Vaz-de-Mello 2017). This possibly suggests that both Ohaus and Moser referred to the same species, and probably a misunderstanding led to the double description of *M. gaujoni*. The simplicity of Ohaus' 'description' might indicate that he used an unpublished name of a species by Moser, or alternatively Moser could have tried to complete Ohaus' description while describing his new genus placing the species. However, available information is not enough to confirm one of these two scenarios. Although, this specimen is the only one having an Ohaus label, we do not consider it to be the lost syntype of *Macroductylus gaujoni* because it was collected by Abbé Gaujon and not by Ohaus as stated in the original description.

Distribution. Ecuador, province of Loja; Peru, department of Piura (needs confirmation) (Fig. 6). The type series of *Manodactylus gaujoni* Moser, 1919 is from Loja, Ecuador (Moser 1919). Ohaus (1909) mentioned for *Macroductylus gaujoni* that there is a hill called Hornil-

los, and a road from there goes to 'San Francizco', the highest peak of the Eastern Cordillera visible from Loja and located about 3000 m asl (Ohaus 1909: 95). From this peak, there is a range from west to east, almost reaching the mouth of River Sabanilla in Zamora; this range is narrow, but with some broad points similar to 'San Francizco' (Ohaus 1909: 95).

Manodactylus paramicola sp. nov.

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Figs 2, 3, 4, 5C, D

Type material. *Holotype* male (IAvH-E) labeled: "Pasto (Nar.) / 29 - X - 58" [white printed label, second line handwritten] // "B. Yanguatin / Suelo paramo / Alt. 3500 mts" [white handwritten label] // "Holotypus ♂ / *Manodactylus paramicola* n. sp. / Clavijo-Bustos, Castro-Vargas & Neita Moreno, / 2024" [red printed label] // "Instituto Humboldt / Colombia / IAvH-E-266051" [white printed label with QR code]. *Paratypes*: 2 males (CEUN) labeled like the holotype, except by: "Paratypus ♂ / ..." [yellow printed label]; 1 male (CMNC) labeled: "Colombia, Cauca, San Sebastian, / Valencia, 1°54'0.15"N, 76°40'12.29"W, WGS84, 2950 m, Cap. manual, / 2018-09-07, D. E. Martínez-Revelo" [white printed label] // "Cauca Valencia / 7-sep-18" [white handwritten label], and the same yellow paratype label.

Description. Male. Total length: 7.9–9.5 mm (holotype: 9.3 mm), maximum width of pronotum: 3.0–3.6 mm (holotype: 3.5 mm), width at the base of pronotum: 2.0–2.5 mm (holotype: 2.4 mm), width at the base of elytra: 2.8–3.3 mm (holotype: 3.3 mm). Color black, shiny, with rounded micropunctures when viewed under high magnification; antennae with antennomeres 1–6 dark brown and antennomeres 7–9 (antennal club) black; apex of femora, and tibiae and tarsi, dark brown. Body elongate and slender, subparallel. **Head:** Clypeus trapezoidal, anterior border emarginate medially, borders on each side of medial emargination narrowly rounded, slightly angulated and upturned; clypeus and frons forming a subpentagonal concave area, surface with small, coarse, rounded punctures densely and irregularly distributed, separated by less than one time one puncture diameter, giving a rugose appearance, and each puncture bearing a short, slender pale-yellow seta; frons with a smooth raised narrow area extending from anterior angles to the vertex, and delimiting the subpentagonal concave area. Fronto-clypeal suture not well-marked. Vertex smooth medially, laterally with punctures similar to those of the surface of clypeus and frons. Eyes small, interocular distance equal to 6.2 times the dorsal width of the eye. Ocular canthus very short and narrow, dorsally covered with small, coarse, rounded punctures densely and irregularly distributed, each bearing a moderately long, thick reddish-yellow seta. Antennae with nine antennomeres, antennal club equal to the combined length of antennomeres 2–6.

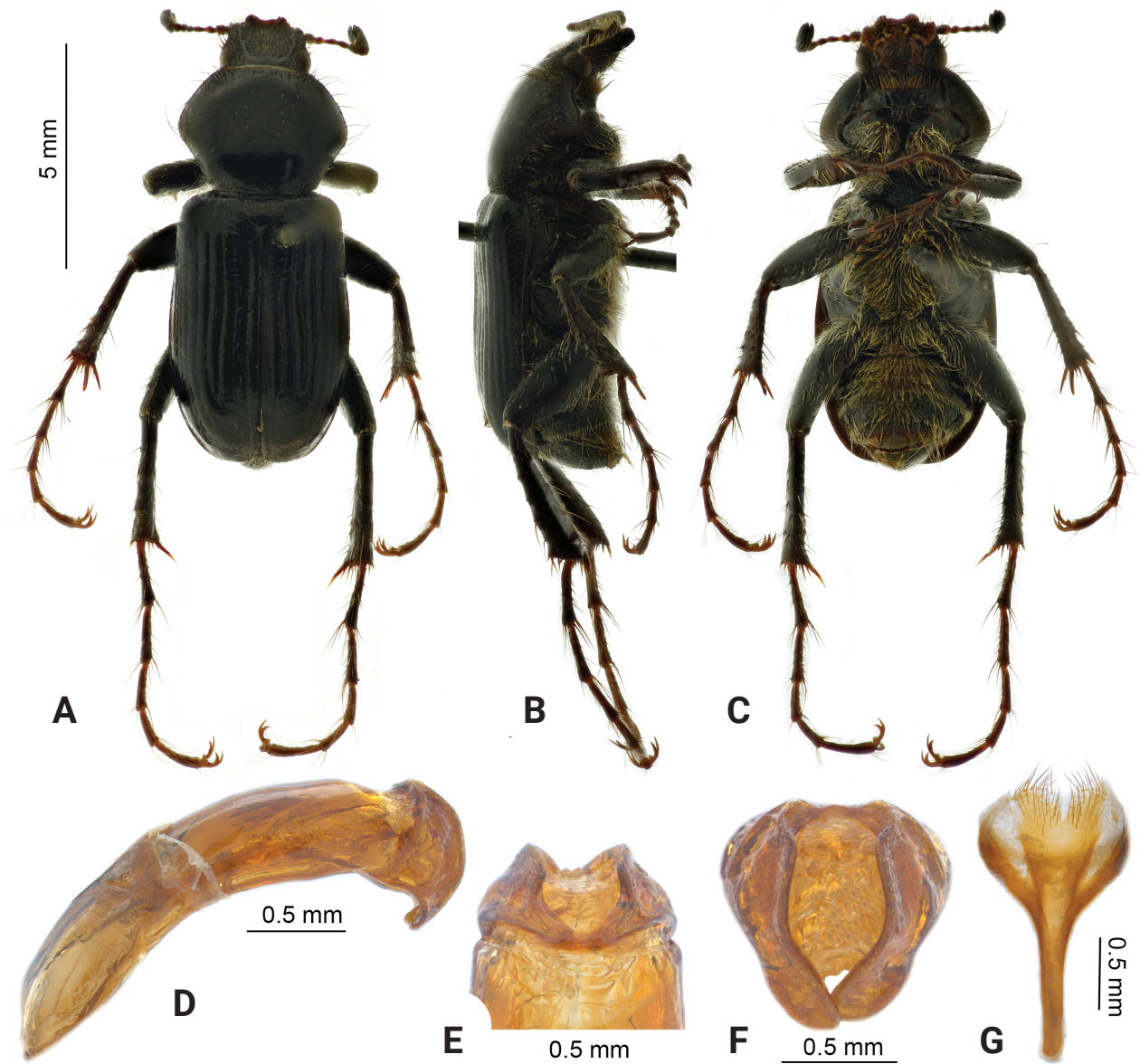


Figure 2. *Manodactylus paramicola* sp. nov., male holotype. **A.** Dorsal view; **B.** Lateral view; **C.** Ventral view; **D.** Aedeagus in lateral view; **E.** Parameres in dorsal view; **F.** Parameres in frontal view; **G.** Spiculum gastrale in dorsal view.

Mouthparts: Mandibles triangular, sclerotized, molar lobes slightly asymmetric; long setae present in the apical half of outer edge and in the inner edge, in a membranous lobe apically setose; surface of molar lobes with ridges. Maxillae with the cardo projected horizontally; maxillary palps with four palpomeres; lacinia apically membranous, with a tuft of setae; galea with eight teeth and covered of setae apically. Labium with mentum oblong, longer than wide, slightly narrowing anteriorly, anterior edge truncate, ventral surface with large, thick setae; prementum with two labial palps, each with three palpomeres. Labrum with the anterior edge of distal epipharynx slightly emarginate medially; chaetopariae with several rows of long setae, laeotorma and dextiotorma long. **Pronotum:** Pronotal disc convex, diamond shaped, strongly wider medially, and wider than long. Surface medially with few

small, rounded punctures sparsely and irregularly distributed, separated by 3–5 times one puncture diameter, each puncture bearing a short, slender pale-yellow seta. Borders margined, with an irregular row of small, rounded punctures; the row has less punctures over the anterior and posterior borders than over the anterior angles; each puncture on anterior and posterior borders bearing a short, slender pale-yellow seta, otherwise, each puncture bearing a moderately long, thick reddish-yellow seta, and over the anterior angles with few punctures bearing a long, thick reddish-yellow seta. Anterior angles acute, posterior angles rounded. **Scutellum:** Scutellar shield slightly longer than wide; surface laterally with few small, rounded punctures sparsely and irregularly distributed, separated by one to less than one times one puncture diameter, each puncture bearing a short, slender pale-yellow seta. Limit

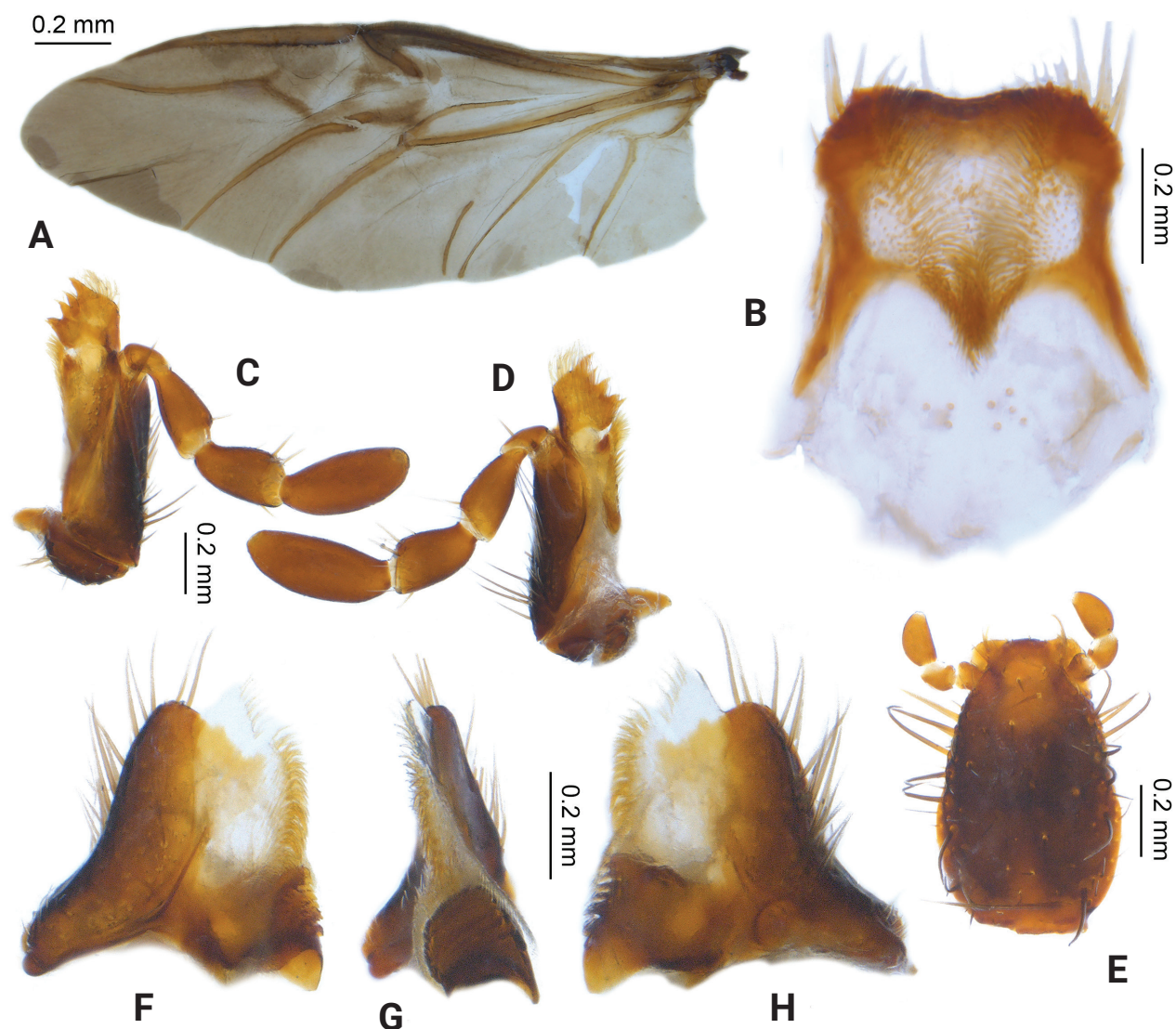


Figure 3. *Manodactylus paramicola* sp. nov., male paratype. **A.** Hind wing in dorsal view; **B.** Epipharynx in ventral view; **C.** Left maxilla in ventral view; **D.** Left maxilla in dorsal view; **E.** Labium in ventral view; **F.** Left mandible in dorsal view; **G.** Left mandible in lateral internal view; **H.** Left mandible in ventral view.

between scutellar shield and mesoscutum not evident.

Hind wings: Fully developed. **Elytra:** Elytral base wider than pronotal base. Humeral and apical calluses slightly prominent, rounded. Each elytron with five striae between suture and humeral callus, 10 in total, but lateral striae less evident; striae disappearing over the apical declivity; each stria deep, with a regular row of small, rounded punctures distanced by 3–5 times one puncture diameter. Interstriae strongly convex. Surface of interstriae, humeral and apical calluses with scattered, small, rounded punctures. Some punctures in the surface, including some in the striae, bearing a short, slender pale-yellow setae. **Hypopomerion:** Hypomerical disc convex. Surface anteriorly smooth, otherwise covered with small, rounded punctures sparsely and irregularly distributed, separated by 5–8 times one puncture diameter; each puncture bearing a moderately long, pale-yellow seta. **Prosternum:** Disc with two anterior, longitudinal sulci. **Mesoventricle:** Disc

flat in the middle. Surface with few small, rounded punctures separated by 1–2 times one puncture diameter, each puncture bearing a short, slender pale-yellow seta. **Mesepimerum and metepisternum:** Surfaces with scattered small, rounded punctures, each puncture bearing a short, slender pale-yellow seta. **Metaventricle:** Disc flat and densely setose in the central area. Surface of central area covered with small, rounded punctures densely and irregularly distributed, separated by less than one time one puncture diameter, each bearing a moderately long, slender pale-yellow seta. Surface of lateral arms similar to that of central area, but with evidently sparser punctures, thus less setose, and smooth externally. **Hind wings:** Apical edge rounded; RP_3 y RA_4+RP_1 apically parallel; MSP projected toward the wing margin; MP_{3+4} short, not projected apically. **Legs:** Femora subequal in length to their respective tibiae; surface almost completely smooth, with scattered small, rounded punctures, each bearing a short,

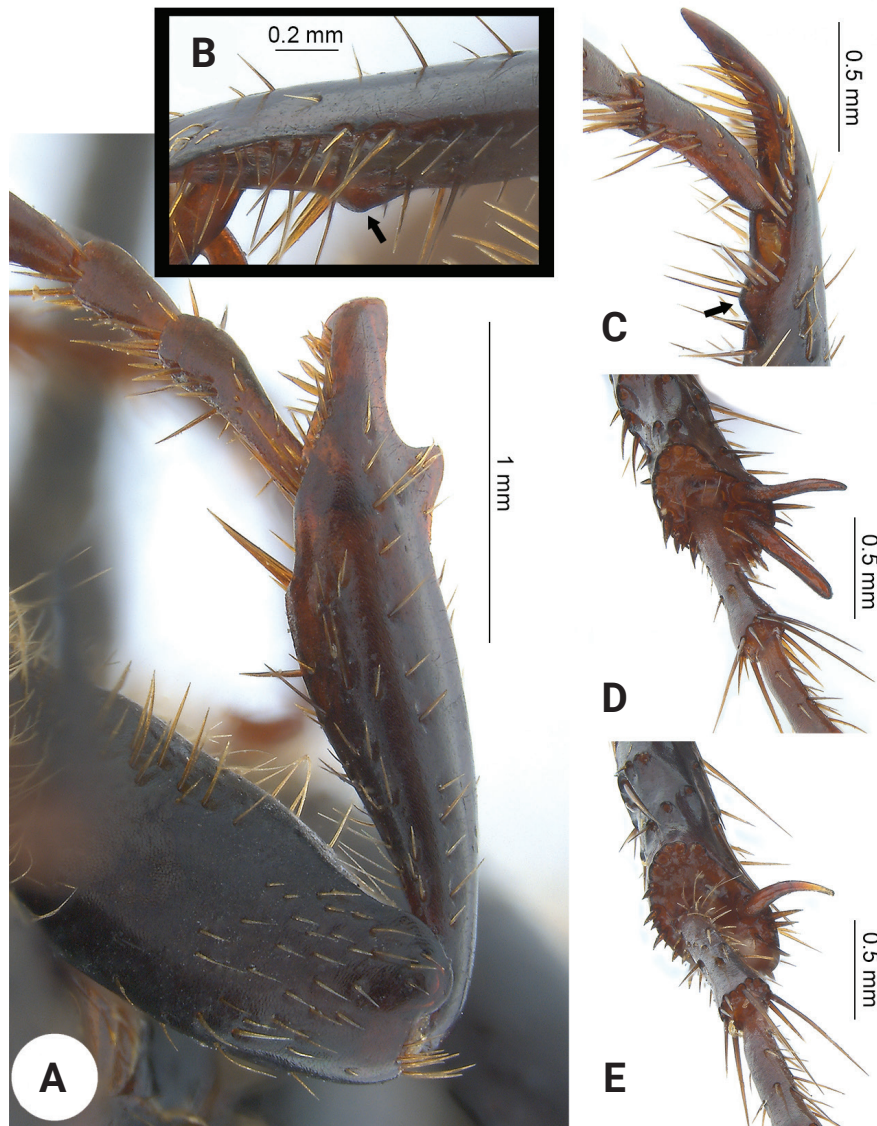


Figure 4. *Manodactylus paramicola* sp. nov., male holotype. **A.** Protibia in dorsal view; **B.** Detail of the downward projection of the inner angle of protibia; **C.** Apex of protibia; **D.** Apex of mesotibia; **E.** Apex of metatibia. Black arrows point to downward projection of the inner angle of protibia.

slender pale-yellow seta; anterior and posterior border moderately setose in the basal third. Tibiae shorter than their respective tarsi. Tarsal claws bifid, ventral part slightly thicker, shorter, and more downward curved than dorsal part; each claw over the basal third with an acute triangular tooth. Protibia along the outer edge with two teeth distributed in the apical third, apical tooth larger than basal; inner angle slightly projected downward; protibia gradually widening from base to apex but narrowing from the inner edge in the apical third; surface smooth except for a few scattered punctures and a regular row of small, rounded punctures separated by 2–4 times one puncture diameter, each puncture bearing a short, slender pale-yellow seta; anterior and posterior borders with scattered moderately long, slender pale-yellow setae; lacking apical spur. Protarsomere 1 subequal to the combined length of protarsomeres 2–3, protarsomere 2–4 subequal in length, and protarsomere 5 subequal to the combined

length of protarsomeres 3–4; internal face of protarsomeres with few scattered short to moderately long, thick reddish-yellow seta. Mesotibiae with a more or less evident ventral transverse carina near the apical third of its length; surface with few small, rounded punctures sparsely distributed, each bearing a short or moderately long, thick reddish-yellow seta; apex over the ventral surface with intercalate extremely short and short, thick reddish-yellow spinules; two subequal apical spurs present, the dorsal spur slightly longer than the ventral, both about three quarters of the length of the mesotarsomere 1. Mesotarsomere 1 slightly longer than mesotarsomere 2, mesotarsomere 2 slightly longer than mesotarsomere 3, mesotarsomeres 3 and 4 subequal in length, and mesotarsomere 5 slightly shorter than the combined length of the mesotarsomere 3–4; internal face of mesotarsomeres with a few scattered short to moderately long, thick reddish-yellow seta. Metatibiae surface with a few

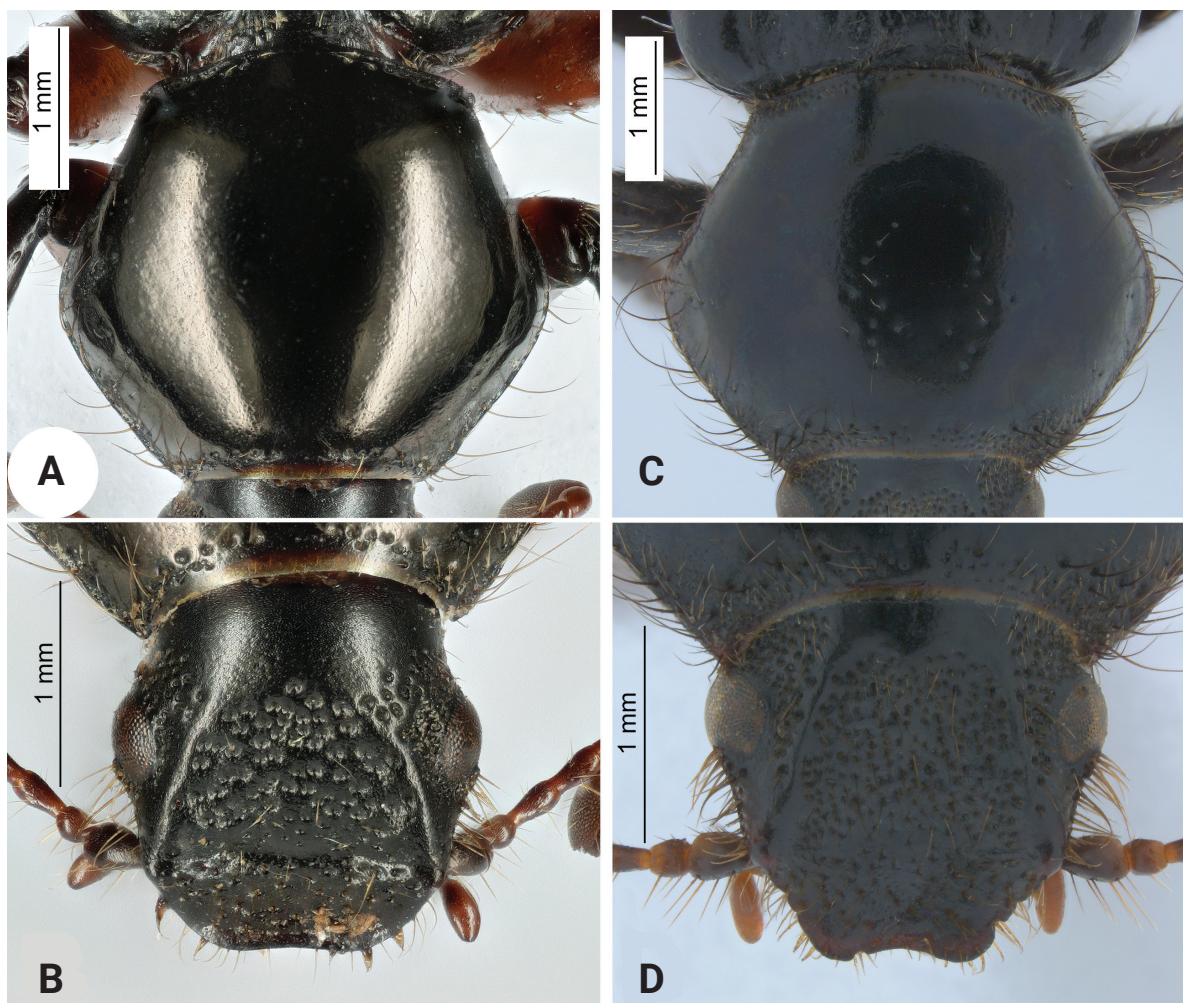


Figure 5. *Manodactylus* species. **A, B.** *Macroductylus gaujoni* Ohaus, 1909, male neotype = *Manodactylus gaujoni* Moser, 1919, male lectotype; **C, D.** *Manodactylus paramicola* sp. nov., male holotype. **A, C.** Pronotum in dorsal view; **B, D.** Head in dorsal view.

small, rounded punctures sparsely distributed, each bearing a short or moderately long, thick reddish-yellow seta; apex over the ventral surface with intercalate extremely short and short, thick reddish-yellow spinules; one apical spur present, about a half of the length of the metatarsomere 1. Metatarsomere 1 slightly longer than metatarsomere 2, metatarsomere 2 slightly longer than metatarsomere 3, metatarsomeres 3 slightly longer than metatarsomere 4, and metatarsomere 5 slightly shorter than the combined length of the metatarsomere 3–4; internal face of metatarsomeres with few scattered short or moderately long, thick reddish-yellow seta (thicker than the slender setae mentioned, but not as spine-like setae). **Abdomen:** Abdominal ventrites 2–5 densely setose medially, surface covered with small, rounded punctures densely and irregularly distributed, separated by less than 1 times one puncture diameter, each bearing a moderately long, slender pale-yellow seta, some few bearing longer setae; surface laterally similar, but with evidently sparser punctures, thus sparsely setose; anterior border of each of these ventrites densely setose. Ventrite 5 longer than the others. Ventrite 6 almost smooth, with few small, rounded punctures bearing a long, slender pale-yellow seta; anterior

or border with moderately long, thick reddish-yellow setae. Pygidium vertical, strongly convex; surface with few small, rounded punctures sparsely and irregularly distributed, separated by 2–5 times one puncture diameter, each bearing a short, slender pale-yellow seta; setae convergent over the longitudinal central area, and punctures sparser externally. **Genitalia:** Hemisternite 9 covered with small, rounded punctures densely and irregularly distributed, separated by one time one puncture diameter; anterior edge truncate and slightly emarginate medially. Spiculum lateral arms short, the spiculum gastrale around two times the length of a spiculum lateral arm, and the cranial part with apex rounded. Phallobase cylindrical, 2.5 times the length of parameres. Parameres fused at the base, short, apically curved and slightly downward, with the apex rounded; the inner edge of each paramere sinuous, with an evident, strong indentation in the basal third.

Female. Unknown.

Diagnosis. *Manodactylus paramicola* shares with *M. gaujoni* the overall appearance (see Diagnosis for *M. gaujoni*). *Manodactylus paramicola* can be distinguished from *M. gaujoni* by having the femora, tibiae, and tarsi very dark brown; clypeus emarginate medially,

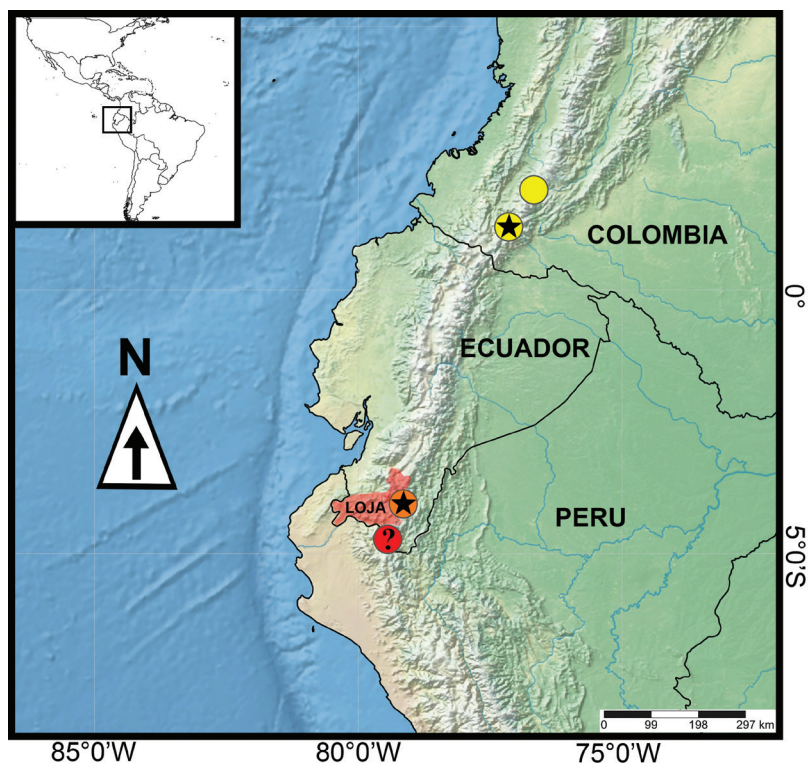


Figure 6. Distribution map of *Manodactylus*. *Macroactylus gaujoni* Ohaus, 1909, male neotype = *Manodactylus gaujoni* Moser, 1919, male lectotype. A star is used for approximate holotype locality when possible; '?' to denote unverified records; red color is used for *Manodactylus gaujoni* Moser, 1919; orange color is used for *Macroactylus gaujoni* Ohaus, 1909; yellow color is used for *Manodactylus paramicola* sp. nov.

with borders on each side of medial emargination narrowly rounded, slightly angulated and upturned; the subpentagonal area formed by clypeus and frons concave; the pronotum also with small, rounded, setigerous punctures on the borders but few also present medially in the disc, separated by 3–5 times one puncture diameter; each elytral stria deep, with a regular row of small, rounded punctures distanced by 3–5 times one puncture diameter; and interstriae strongly convex.

Etymology. Epithet compound, from the Spanish noun *Páramo* for Paramo ecosystem, and the Latin suffix *-icola* meaning inhabitant. The specific name means 'inhabitant of Paramo', in allusion to the ecosystem where the specimens were collected.

Distribution. Colombia, departments of Cauca and Nariño (Fig. 6). Three of the specimens were collected in Pasto, department of Nariño, with the information 'Paramo ground' (*Suelo paramo*) on the label, referring to the ecosystem in which the specimens were found. The fourth specimen was collected in San Sebastián, a small, populated place located less than 10 kilometers from the Páramo de las Papas in the department of Cauca.

Acknowledgements

Thanks to the curators and staff of the institutions where studied type specimens are deposited, especially to B. Jaeger (MFNB) for supplying photographs of the lecto-

type of *Manodactylus gaujoni* used in this manuscript. Also, we thank the reviewers, A. Ballerio and the editor for comments on previous versions of this manuscript. Special thanks to L. L. Vargas-Longas and W. Bayfield-Farrell for their comments and language revision of the manuscript. Also, we thank Diego E. Martínez R., who collected, and shared with us, a paratype.

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Jahr/Year: 2024

Band/Volume: [NF_71](#)

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