



A new genus and three new species of Neotropical Tanyproctini (Coleoptera: Scarabaeidae: Melolonthinae)

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Abstract

A new genus of scarab beetle, *Eideria* Neita & Ocampo, and three new species, *E. pentaphylla* Neita & Ocampo, *E. glabripennis* Neita & Ocampo, and *E. pedroantonioi* Neita & Ocampo, are described based on specimens collected in the drylands of Colombia and rainforests of Ecuador. Based on the evaluation of morphological characters and within the context of the current classification of the subfamily Melolonthinae, this genus is placed in the tribe Tanyproctini (formerly called Pachydemini). Diagnostic characters, illustrations, and an identification key are provided for the new species. The relationships of *Eideria* with other Neotropical Tanyproctini genera are discussed.

Key words: Colombia, Ecuador, drylands, morphological characters, taxonomy

Resumen

Se describe un nuevo género de escarabajo, *Eideria* Neita & Ocampo, y tres nuevas especies, *E. pentaphylla* Neita & Ocampo, *E. glabripennis* Neita & Ocampo y *E. pedroantonioi* Neita & Ocampo, basadas en especímenes colectados en áreas secas de Colombia y bosques del Ecuador. Este género es ubicado en la tribu Tanyproctini (anteriormente denominada Pachydemini) en base a la evaluación de caracteres morfológicos y dentro del contexto actual de la clasificación de la subfamilia Melolonthinae. Se proveen caracteres diagnósticos, ilustraciones y una clave para la identificación de las nuevas especies. Se discuten las relaciones con otros géneros de Tanyproctini Neotropicales.

Introduction

During one collecting event at the municipality Mariquita (Tolima, Colombia) a specimen of a new species of an undescribed genus of Melolonthinae was collected. Later, on a visit to the collection of the Institute Alexander von Humboldt in Villa de Leyva specimens of a second species of this new genus were found. Finally, 55 specimens of a third new species were found in the Canadian Museum of Nature collection.

According to the current classification of the subfamily Melolonthinae (Evans 2003, Bouchard *et al.* 2011), and based on morphological evidence, this new genus is placed in the tribe Tanyproctini (formerly called Pachydemini).

The tribe Tanyproctini (as was defined by Lacroix 2007 and Evans 2003 [as Pachydemini]) is classified in Melolonthinae (Scarabaeidae) and includes 118 genera and 575 valid species worldwide. The group is distributed in all major biogeographic regions except Australia. In the Neotropics, Tanyproctini is currently represented by 17 genera and 29 species (Ocampo & Smith 2006, Ocampo & Ruiz-Manzanos 2007, Ocampo *et al.* 2010).

Among the Melolonthinae, the taxonomy of the tribe Tanyproctini is particularly difficult (Sanmartín & Martín-Piera 2003, Ocampo & Ruiz-Manzanos 2007). In most cases, genera are recognized by characters of male external morphology and are based on very few specimens. Females are difficult to collect and are only known for a few species, and most of the genera with known females have strong sexual dimorphism.

Neotropical genera of Tanyproctini generally contain few species and most accommodate only a single species based on one or few characters (Sanmartín & Martín-Piera 2003). Until now, there have been no reports of species of Tanyproctini for South America north of Bolivia, and they were known to be distributed in the Monte, Chacoan, Central Chile, and Patagonian biogeographical provinces (Lacroix 2007, Ocampo *et al.* 2010).

The purpose of this contribution is to describe a new genus and three new species of Neotropical Tanyproctini from Colombia and provide diagnostic characters and illustrations for each of them.

Material and methods

Definition of taxonomic characters and character examination:

Internal and external morphological characters formed the basis of this work. Specimens were examined using a dissecting microscope (6.5 to 40 X) and fiber-optic lights. For measurements, we used an ocular micrometer. Internal sclerotized structures were dissected by relaxing the specimen in hot water. Heavily sclerotized parts were soaked in a dilute solution (about 15%) of potassium hydroxide and neutralized in a dilute solution (about 15%) of acetic acid. For dissected specimens, wings and genitalia were card-mounted or placed in a glycerin-filled vial beneath the specimen.

The following standards were used for characters:

Body length. Measured from the apex of the clypeus to the apex of the elytra.

Puncture density. Defined as dense if punctures are nearly confluent to less than two puncture diameters apart, moderately dense if punctures are between two to six puncture diameters apart, and sparse if punctures are separated by more than six puncture diameters.

Length of setae. Defined as minute if less than 0.2 mm, short if between 0.2–0.5 mm, moderately long if between 0.5–1.0 mm, and long if between 1.0–2.0 mm.

Type of setae. Defined as “hair-like” if slender and erect, “thickened” if slightly thick and erect or partially decumbent, and “spine-like” if broad and thick. Setae are subject to wear and may be abraded.

Color. Described based on dry specimens that are viewed with magnification and illumination.

Material examined:

The results of this study were based on specimens from the following institutions and collections. The collections and their acronyms are as follows:

CMNC: Canadian Museum of Nature, Ottawa, Canada (Robert Anderson, François Génier)

IAVH: Colección Zoológica Instituto Alexander von Humboldt, Villa de Leyva, Boyacá, Colombia (Claudia Alejandra Medina)

IAZA: Colección de Entomología del Instituto de investigaciones de las Zonas Áridas, Mendoza, Argentina (Federico Ocampo)

MLPA: Colección de Entomología, Museo de Ciencias Naturales de la Plata, La Plata, Argentina (Analía Lanteri)

Eideria Neita & Ocampo, new genus

(Figs. 1–29)

Type species. *Eideria pentaphylla* Neita & Ocampo, new species, here designated.

Description of male. *Head* (Fig. 1): clypeus with apex round, margin reflexed. Labrum poorly developed, conical, not visible beyond clypeal margin (in dorsal view). Labium poorly developed, pentagonal; labial palpus with 2 palpomeres, palpomere 1 membranous, palpomere 2 sclerotized (Fig. 5). Maxilla with galea poorly developed, palpus long, with 4 palpomeres; palpomere 4 as long as 1–3 combined (Fig. 6). Mandible poorly developed (Fig. 7). Eye canthus strongly produced laterally, outer edge expanded in large, rounded projection. Antenna with 9 antennomeres, club large, subequal in length to antennomeres 2–4 combined (Fig. 9a). *Pronotum* (Fig. 1): convex, wider than long. Margins slightly rounded, with lateral bead; bead extended to lateral half of posterior margin. Anterior

angles acute; posterior angles broadly rounded. *Elytra* (Fig. 1): convex, elongate, subparallel, completely covering dorsal surface of abdomen. Elytra with 4–8 striae. *Hind wing* (Fig. 8): subcostal and radial vein well sclerotized, not reaching radial sector vein at wing apex; radial sector vein forked at apex; medial vein well developed; medial loop short; cubital vein slightly sclerotized apically from medial loop connection; anal veins 1, 2 not connected, not forming a basal cell. *Venter*: prosternal process absent, coxae transverse. Mesosternum with sulcus on middle, surface punctate, setose; punctures small, dense, ocellate. Metasternum with the apex divergent, punctures ocellate, densely setose. Abdomen with 6 ventrites exposed; ventrite V longer than ventrite I–IV combined. Pygidium wider than long, concave, recumbent toward metacoxae. Surface with punctures strongly impressed, ocellate, setose. *Legs*: protibia with 3 teeth (Fig. 10a), protibial spur absent (Fig. 10b). Mesotibia with spine-like setae on external margin, mesotibial apex with 1 spur on inner margin (Fig. 11a–b). Metatibia with 2 spurs; spurs subcontiguous, on the inner edge (Fig. 12a–b). Protarsomeres, mesotarsomeres, and metatarsomeres 1.85 times longer than tibiae (Figs. 10a, 11a, and 12a). Tarsomeres 1 and 5 twice as long as 2–4 combined; tarsomeres 2–4 subequal; all tarsi with long, apical setae (Figs. 10a–12b). Tarsal claws bifurcated, symmetrical (Fig. 13). *Genitalia* (Figs. 14a–b): parameres with a small carina on outer surface, outer surface setose; phallobase slender, with basal tegmen developed. spiculum gastrale developed (Fig. 15).

Description of female. Most New World Tanyproctini present strong sexual dimorphism. Differences can be expressed in body length and width, color, size of antennae (smaller in females), and eyes (reduced in females). Female specimens are known for the following New World Tanyproctini genera: *Burmeisteriellus* Berg, 1868; *Castanochilus* Ohaus, 1909; *Lichniops* Gutiérrez, 1946; *Lichniopsoides* Martínez, 1953; *Myloxena* Berg, 1881; *Myloxenoides* Martínez, 1975, and *Ptyophis* Redtenbacher 1868. *Eideria* females are larger than males; have lighter dorsal coloration of clypeus, pronotum, and elytra; and have reddish brown legs (Figs. 2, 4). *Head*: color black; punctures setose, larger than on male (Fig. 16). Clypeus slightly parabolic (Fig. 16). Eye canthus well developed, with few setae; setae long, slender. Eyes poorly developed. Frontoclypeal suture well defined, complete, convex at middle. *Pronotum*: convex, wider than long at middle. Surface moderately punctate, punctures ocellate, moderate in size. Anterior angles rounded; posterior angles broadly rounded (Fig. 17). *Scutellum*: surface opaque, punctures moderately dense. *Elytra*: convex, elongate. Surface shiny, setose, densely punctate. *Hind wings*: poorly developed, nonfunctional, reduced to a small lobe. Propygidium and pygidium not covered by elytra. *Pygidium*: not recumbent. *Venter*: prosternal process absent, slightly concave on sides. Abdomen, with 6 ventrites exposed medially, ventrite VI longer than ventrites III–V combined. *Legs*: protibia with 3 teeth; basal tooth small, dorsal surface with a line of setae from base to apex; protibial spur not developed (Fig. 18). Mesotibia with one spur (Fig. 19). Metatibia with two subcontiguous spurs (Fig. 20). Tarsi as long as tibiae (Fig. 18–20). Tarsal claws simple (Fig. 21).

Classification. Neotropical Tanyproctini were reviewed by Martínez (1975), who also provided a genus-level key to the tribe. Based on external morphology and male genitalia, we consider that *Eideria* belongs to the tribe Tanyproctini as it is currently defined.

Current classification of Melolonthinae and, in particular, the concepts currently used to diagnose Neotropical Tanyproctini and Macroductilini, make difficult to characterize and even separate these two tribes. As a consequence of this, it is sometimes difficult to place new genera within these tribes. Katovich (2008) cited three synapomorphies for Macroductylini: Fifth visible ventrite longer than fourth visible ventrite; propygidium lacking a complete suture between the ventrite and tergite (these characters are also found in other tribes in Melolonthinae); and metatibiae with one or two closely placed apical spurs, inserted below the tarsal articulation, so that the metatarsus moves past them (occasionally spurs are secondarily absent). According to Katovich (2008), while none of these characters are unique, together they are unique to Macroductylini.

According to our observations, Macroductylini has the basal articulation condyle of the first metatarsomeres well developed, projecting above of the inner cuticle of metatibia (*Ancistrosoma* Curtis, 1835; *Barybas* Blanchard, 1850; *Ceraspis* LePeletier & Serville, 1828; *Chariodema* Blanchard, 1850; *Clavipalpus* Laporte, 1832; *Dicrania* LePeletier & Serville, 1828; *Gama* Blanchard, 1850; *Isonychus* Mannerheim, 1829; *Macroductylus* Dejean, 1821; and *Plectris* LePeletier & Serville, 1828). In Neotropical Tanyproctini, the condyle is poorly developed. Macroductylini species also have the metatibiae with two adjacent spurs (or no spurs), a characters commonly used to diagnose this tribe. Some Tanyproctini genera also have two adjacent spurs on the external edge of metatibia (some species in *Acylochilus* Ohaus, 1909; *Leuretra* Erichson, 1847; *Myloxena* Berg, 1881; *Myloxenoides* Martínez, 1975; and *Puelchesia* Ocampo & Smith, 2006), while other Tanyproctini genera such as; *Anahi* Martínez, 1958;

Luispenaia Martínez, 1972; and *Burmeisteriellus* Berg, 1898 have the inner spur in the metatarsal apical notch and the outer spur on the external edge of metatibia; or *Diaphylla* Erichson, 1847 without spurs in the metatibia. The pygidium is strongly recumbent in Neotropical Tanyproctini and not strongly recumbent in Macroductylini genera.

Sexual dimorphism in Macroductylini is less evident than in most Neotropical Tanyproctini. Macroductylini sexual dimorphism is generally expressed in the length and shape of antennal club, the form of the pygidium, and sometimes coloration, but these characters never reach the extreme morphological differences found in most Neotropical Tanyproctini species. Sexual dimorphism in Tanyproctini is strongly expressed in characters such as body length and width, color, size of antennae (much smaller in females), eyes (reduced in females), and hind wings (reduced and nonfunctional in females).

Based on the above, we feel more confident placing *Eideria* within the tribe Tanyproctini.

Eideria shares with other New World Tanyproctini genera the following character states: body elongate, slender, elytral margins subparallel; clypeus broadly rounded, recumbent; frontoclypeal suture developed and evident; mouthparts (labrum, mandibles, maxillae, labium) strongly reduced; pronotum convex, wider than long; legs long slender; protibia with three teeth; mesotibiae and metatibiae with transverse carinae developed. Six ventrites exposed medially; V ventrite longer than ventrites I–IV combined; males with pygidium strongly recumbent; male genitalia symmetrical, parameres slender.

Diagnosis. Males of the genus *Eideria* are distinguished from all other Neotropical Melolonthinae by the following combination of characters: clypeus broadly rounded; labrum reduced, conical, not visible beyond clypeal margin (in dorsal view); antennae with 9 antennomeres, antennal club with 4–5 antennomeres (Fig. 9a); venter lacking prosternal process; metaesternum with apex divergent; pygidium recumbent toward metacoxae; protibial spur absent, mesotibia with 1 spur, metatibia with 2 spurs (Figs. 11a–12b); spurs subcontiguous, both set below tarsal articulation; protarsomeres, mesotarsomeres, and metatarsomeres 1 and 5 subequal in length (1.8 times longer than wide) (Figs. 10a, 11a, 12a).

Eideria is similar to *Luispenaia* and *Puelchesia*. *Luispenaia* has a prosternal process, but this is absent in *Puelchesia* and *Eideria*. *Luispenaia* has tubercles on dorsal tibial surface, but this surface is smooth in *Puelchesia* and *Eideria*. *Luispenaia* and *Puelchesia* have tibiae with spurs, one on protibia and two on mesotibia and metatibiae, while *Eideria* has no spur on protibia, one spur on mesotibia, and two spurs on metatibia. *Puelchesia* and *Eideria* have two adjacent spurs on the apex of the metatibia; *Luispenaia* has two separated spurs, one spur on the lateral margin and one within the apical notch of the metatibia (the notch that allows mobility of the tarsus back and forth). Tarsal claws are simple in *Puelchesia*, but they are bifurcated in *Luispenaia* and *Eideria*. The apex of metasternum is bifurcated in *Luispenaia*, and simple in *Puelchesia* and *Eideria*. *Puelchesia* has the hind wing with anal veins V_1 and V_2 connected and forming a basal cell, in *Luispenaia* and *Eideria* anal veins V_1 and V_2 are not connected and the basal cell is not present (Fig. 8).

Etymology. *Eideria* is feminine in gender. We are pleased to name this genus after our friend and colleague Eider Ruiz-Manzanos, who unexpectedly passed away at a young age and who devoted her last years of research to the study of Neotropical Tanyproctini.

Eideria pentaphylla Neita & Ocampo, new species

(Figs. 1–22, 27, 29)

Type material: *Holotype*, at IAVH, labeled: “**Colombia**, Boyacá. / SFF Iguaque, El Nispero. / 5° 38’N; 73° 31’W. 2730 m. / Malaise 28-X-2001-14-XI-2001. / P. Reina. M. 2482”. Allotype female at IAVH labeled: “**Colombia**, Boyacá. / Villa de Leyva. 5° 38’ 00.00”N; 73° 31’ 31.57”W. 2200 m / IX-1996. / C. Chamorro IAVH-E No. 88503”. One male paratype at IAVH labeled: “**Colombia**, Boyacá. / SFF Iguaque, El Nispero. / 5° 38’N; 73° 31’W. 2730 m. Malaise 28-X-2001-14-XI-2001. P. Reina. M. 2483”. One male paratype at IAZA labeled: “**Colombia**, Boyacá. / SFF Iguaque, El Nispero. / 5° 38’N; 73° 31’W. 2730 m. Malaise 14-XI-2001-07-XII-2001. P. Reina. M. 2580”. Two male paratypes at IAVH labeled: “**Colombia**, Boyacá / SFF Iguaque, Cabaña Chaina. / 5° 38’N; 73° 31’W. 2730 m. / Malaise 25-X-2001-16-XI-2001. / P. Reina. M. 2484”. One male paratype at IAVH labeled as previous, except for: “01-XII-2001-16-XII-2001. / No. 2582”. Two paratypes, one at IAZA: “**Colombia**, Boyacá. / Villa de Leyva. 5° 38’ 00.00”N; 73° 31’ 31.57”W. 2200 m. / Fuente de Luz. IX-1996. / M.-IAvH-E 88512”. One male paratype at IAVH, labeled as previous except “88513”.



1



2

FIGURES 1, 2. *Eideria pentaphylla*. 1, habitus of holotype; 2, habitus of allotype. Scale bar: 0.4 mm.



3



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FIGURES 3, 4. *Eideria pentaphylla*. 3, holotype lateral view; 4, allotype lateral view. Scale bar: 0.4 mm.

Type locality. Colombia, Boyacá, Santuario de Flora y Fauna de Iguaque, El Níspero.

Description of holotype male. Length 7.81 mm; width: 3.01 mm. Head, pronotum, elytra, venter, and legs dark brown. *Head* (Fig. 1): surface convex, densely punctate, punctures setose, large (0.02–0.06 mm), interocular width 0.7 mm. Eye canthus truncate, setose; setae moderately dense, slender, long. Frontoclypeal suture evident, complete. Clypeus broadly rounded; surface concave, densely punctate; punctures moderate in size (0.03–0.04 mm) (Fig. 1). Clypeal margin reflexed, shape parabolic. Clypeal ventral surface setose; setae slender, long. Mandibles poorly developed on the incisive and molar area (Fig. 7). Labrum poorly developed, conical, setose; setae moder-

ately long. Labium poorly developed, ligule prominent (Fig. 5). Maxillae with galea poorly developed, lacinia not developed, maxillary palpus with 4 palpomeres, palpomere 4 as long as 1–3 combined (Fig. 6). Antennae with 9 antennomeres; antennomere 1 robust; antennomere 2 globose; antennomeres 3 and 4 similar to length, with base cylindrical, apices broad; antennal club with 5 antennomeres, with few setae (Fig. 9a). *Pronotum* (Figs. 1, 3): convex, wider than long at middle. Surface densely punctate, punctures ocellate, setose, moderate in size (0.038–0.046 mm). Marginal bead present; anterior margin concave; lateral margins slightly angulate, setose, setae hair-like, long; posterior margin slightly defined at middle. Anterior angles rounded; posterior angles broadly rounded. *Scutellum* (Fig. 1): surface opaque, densely punctate, setose; punctures ocellate, moderate in size (0.016–0.020 mm), scutellar apex rounded. *Elytra* (Fig. 1): Convex, elongate, subparallel. Surface opaque, densely punctate, setose; punctures moderate in size (0.03–0.05 mm); setae long, hair like. Elytra with 8 striae. Elytral margins setose, setae long, hair-like. *Hind wings* (Fig. 8): subcostal and radial vein well sclerotized, not reaching radial sector vein at wing apex; radial sector vein forked at apex; medial vein well developed; medial loop short; cubital vein slightly sclerotized apically from medial loop connection; anal veins 1, 2 not connected, not forming a basal cell. *Venter*: prosternal process absent, on the side slightly concave, surface densely setose; setae slender short, tawny. Mesosternal surface sparsely setose, slightly concave at middle. Metasternal surface densely punctate, punctures ocellate, setose; setae slender and long; metasternal apex divergent. Propygidium slightly convex at middle. *Pygidium*: recumbent, surface densely punctate, punctures ocellate; with moderately long, slender setae. *Legs* (Figs. 10–12): coxae sparsely setose, setae long. Femoral surface sparsely setose, setae long. Protibia with 3 teeth; basal tooth small, surface with line of setae from base to apex. Mesotibiae and metatibiae with medial transverse carinae, carina with 5–6 spine-like setae; apices semicircular, transversely truncate. *Genitalia* (Figs. 14a–b): parameres simple, symmetrical, elongate, slender, tapered toward apex; parameres as long as phallobase, with a setose sulcus on outer surface.

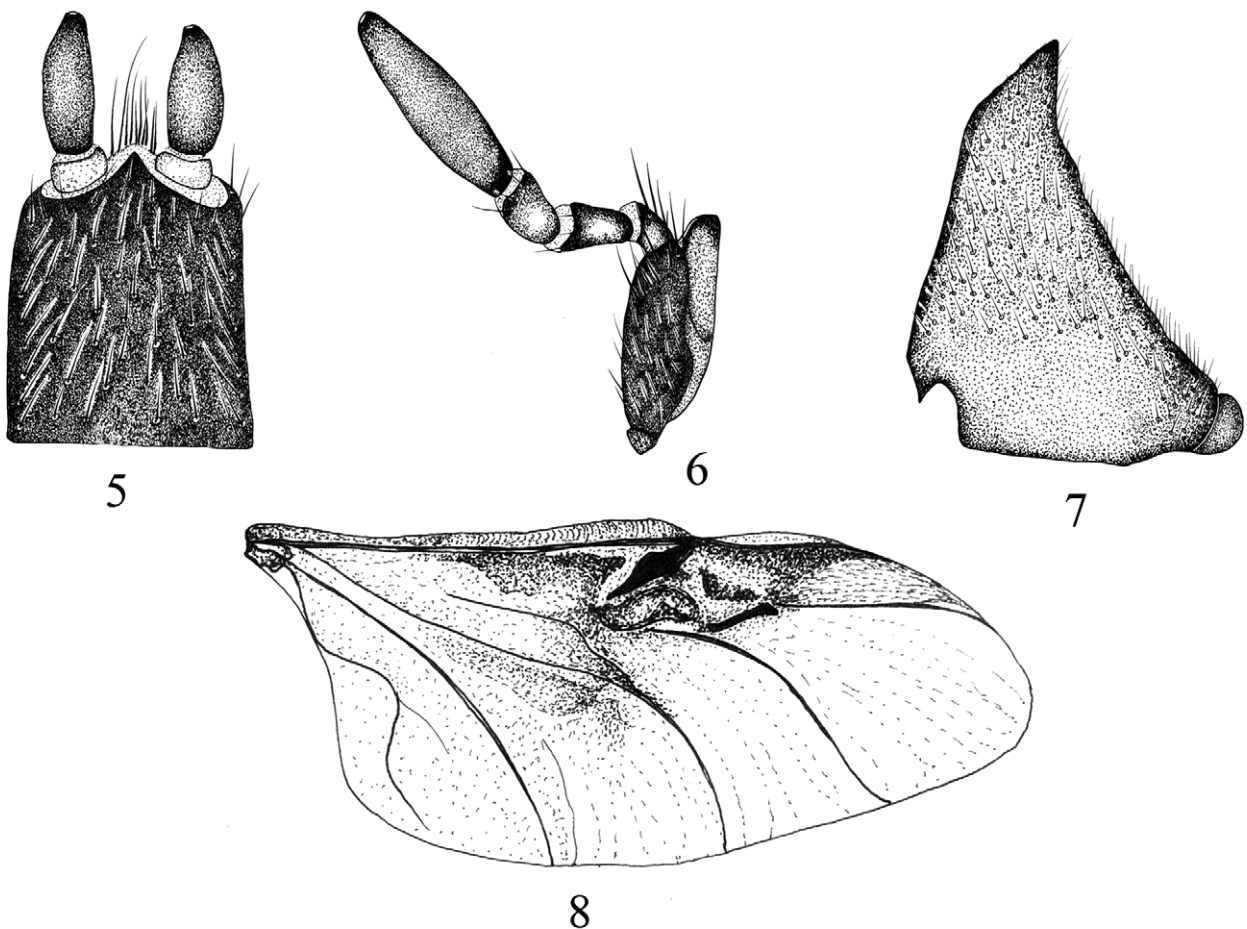
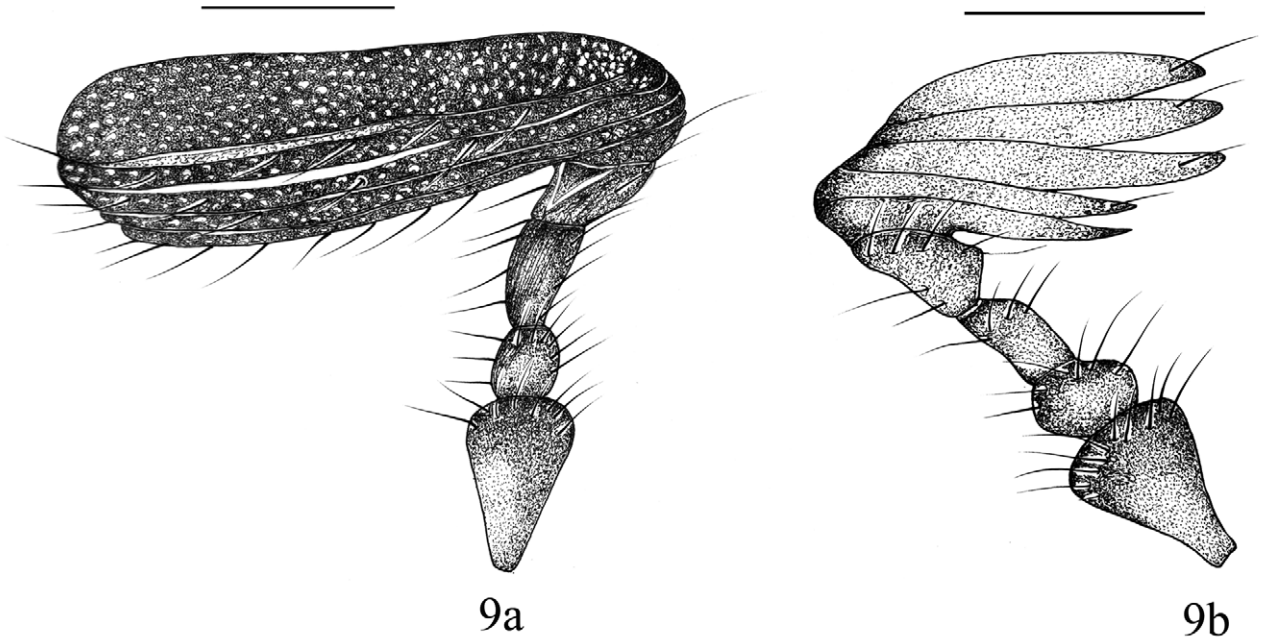
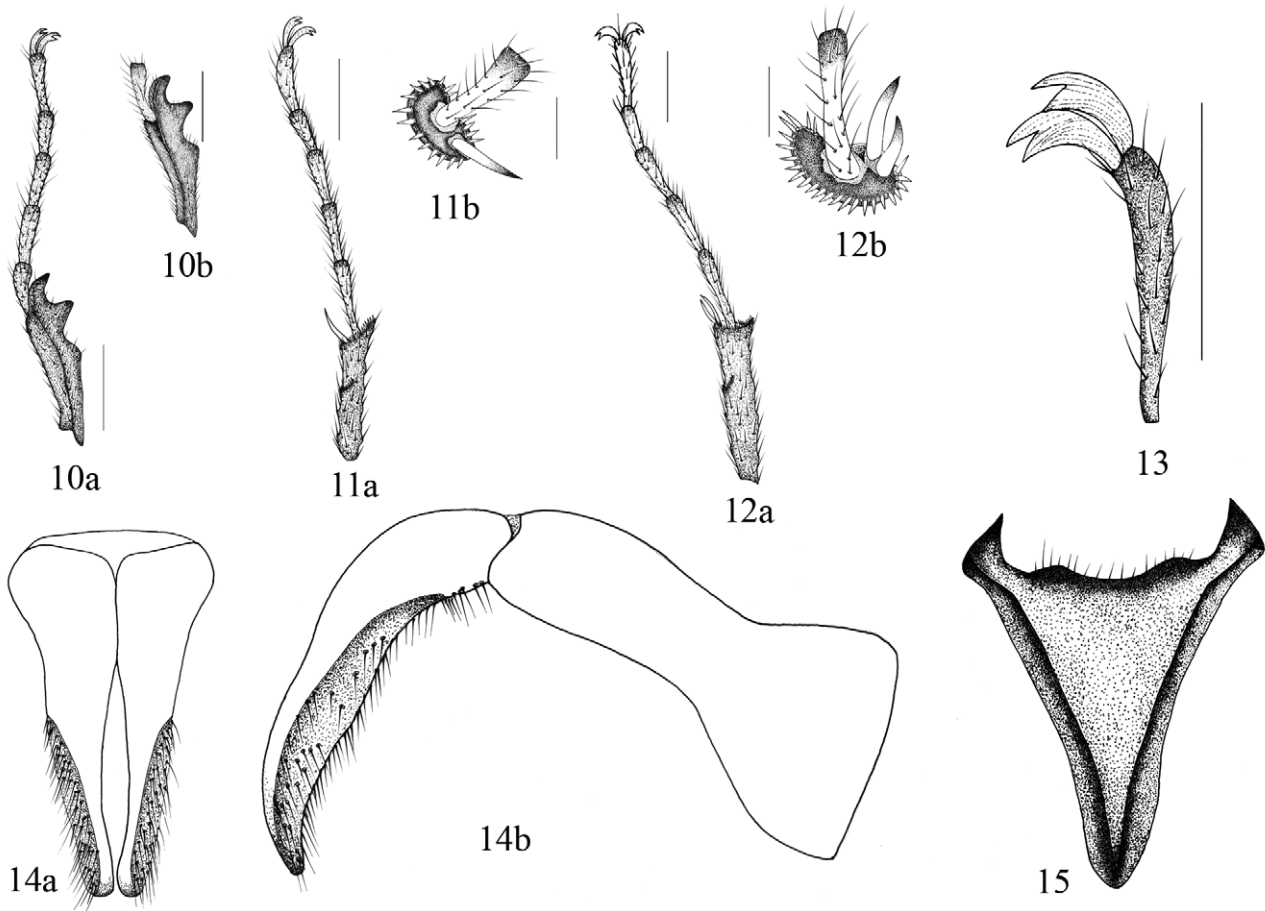


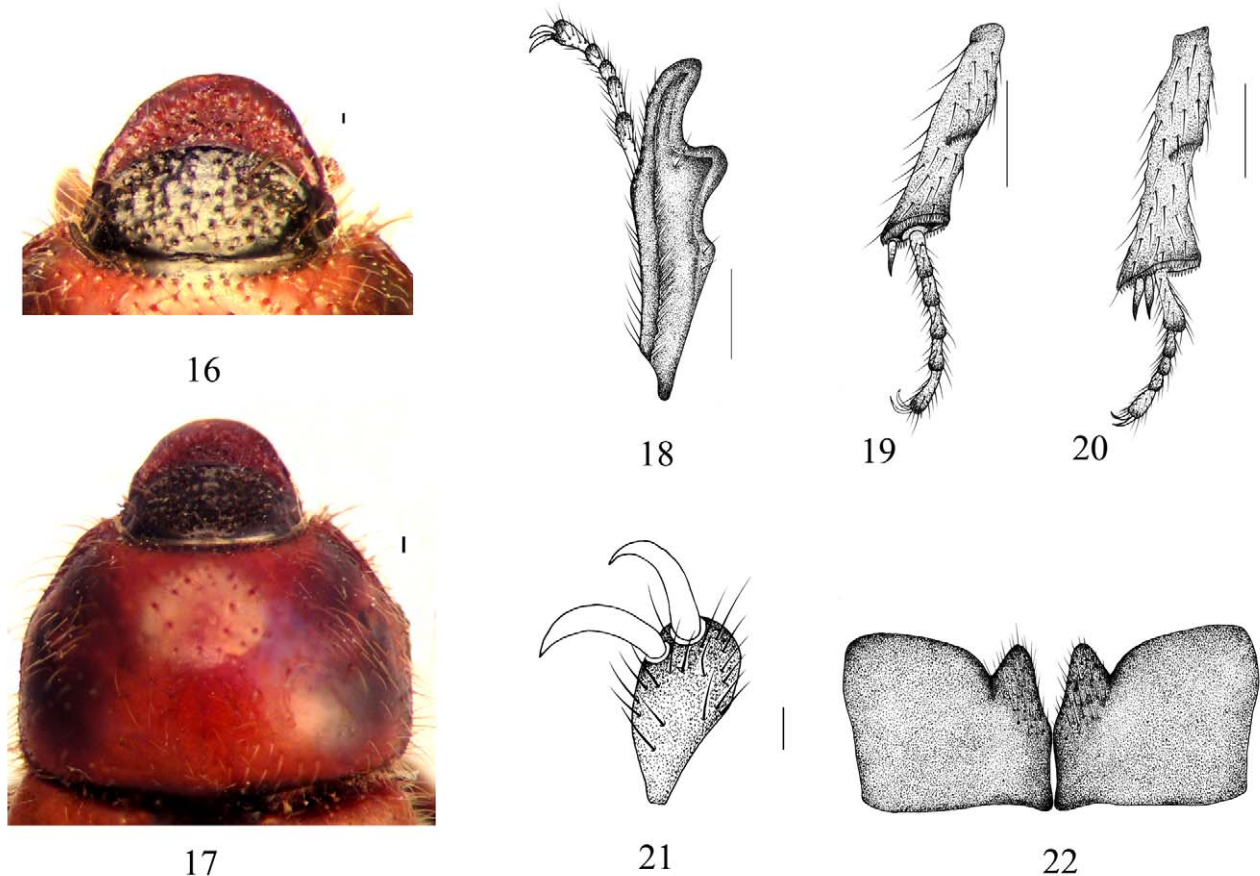
FIGURE 5–8. *Eideria pentaphylla*. 5, labium dorsal view; 6, maxilla ventral view; 7, mandible ventral view; 8, hind wing.



FIGURES 9a–b. *E. pentaphylla*, antennae a) male; b) female. Scale bar: 0.1 mm.



FIGURES 10–15. *Eideria pentaphylla*. 10, protibia. a) dorsal view; b) ventral view. Scale bar: 0.01 mm; 11, mesotibia. a) dorsal view; b) inner view. Scale bar: 0.01 mm; 12, metatibia. a) dorsal view; b) inner view. Scale bar: 0.01 mm; 13, tarsal claw. Scale bar: 0.01 mm; 14, parameres. a) caudal view; b) lateral view; 15, spiculum gastrale ventral view.



FIGURES 16–22. *Eideria pentaphylla*. 16, head, allotype, dorsal view; 17, pronotum, allotype, dorsal view; 18, protibia of allotype. Scale bar: 0.01 mm; 19, mesotibia of allotype. Scale bar: 0.01 mm; 20, metatibia of allotype. Scale bar: 0.01 mm; 21, protarsal claw of allotype. Scale bar: 0.01 mm; 22, gonocoxite.

Allotype. Female. Length 9.37 mm, width 4.26 mm. Clypeus, pronotum, elytra, pygidium, legs reddish brown. *Head* (Figs. 16–17): frons convex, densely punctate, punctures setose, moderate in size, sparser than in male (0.03–0.075 mm). Interocular width 1.2 mm. Clypeus slightly parabolic; surface concave, densely punctate; punctures moderate in size (0.075–0.100 mm) (Fig. 16). Clypeal margin reflexed. Clypeal ventral surface setose, setae long, slender. Antennae with 9 antennomeres, antennal club with 5 antennomeres (Fig. 9b); antennomere 1 robust; antennomere 2 globose; antennomere 3, 4 with base cylindrical; antennal club with antennomeres 5–6 with a small notch, shorter than antennomeres 7–9, with few setae. *Pronotum* (Fig. 17): convex, wider than long at middle. Surface moderately punctate; punctures ocellate, moderate in size, bearing setae (0.030–0.033 mm). Marginal bead present; anterior margin concave, with membrane; lateral margins slightly angulate, setose; setae hair-like, long; lateral margins nearly smooth. Anterior angles rounded; posterior angles broadly rounded. *Scutellum* (Fig. 2): surface opaque, punctures moderately dense, setose; punctures ocellate, moderate in size (0.026–0.033 mm); apex rounded. *Elytra* (Fig. 2): convex, elongate. Surface shiny, densely punctate, setose; punctures moderate in size (0.066–0.100 mm); setae long, hair like. Elytra with 8 striae. Elytral margins setose, setae long, hair-like. *Venter*: surface setose, setae moderately dense, slender, short, tawny. Metasternal surface sparsely setose, punctate; punctures moderately dense, ocellate, setose; setae slender, long; metasternal apex divergent in middle. *Pygidium*: not recumbent; surface densely punctate; punctures ocellate, setose; setae slender, moderately long. *Legs* (Figs. 18–21): coxae sparsely setose, setae long. Femora with surface sparsely setose; setae long. Protibia with 3 teeth, basal tooth small, dorsal surface with a line of setae from base to apex. Mesotibiae and metatibiae with medial transverse carina, carina with 6–8 spine-like setae; apex semicircular, transversely truncate. *Genitalia*: as in (Fig. 22).

Variation. Five male paratypes do not differ significantly from holotype; length ranges from 7.81–8.52 mm, width 2.85–3.51 mm. Two specimens have elytra that are lighter in color than holotype. One specimen has 9 elytral striae.

Distribution. The species is known from Villa de Leyva and Iguaqué (Boyacá, Colombia).

Locality records \ (6 adults, 5 males and 1 female). **Colombia:** Boyacá, Municipio de Villa de Leyva. Boyacá, Municipio de Villa de Leyva, Santuario de Flora y Fauna de Iguaque (Fig. 29).

Temporal distribution. October, November.

Diagnosis. Males of this species are most easily recognized by the following combination of characters: clypeus rounded; antennal club with 5 antennomeres, elytra with 8 striae. The unique form of the parameres is also diagnostic.

Etymology. From the latin “*penta-*” and “*-phylla*”, referring to the five antennomeres on the antennal club of this species.

Natural history. Specimens of *E. pentaphylla* have been attracted to lights in a dry forest (Fig. 27) in the Andes at elevations between 2,100–2,800 m.

***Eideria glabripennis* Neita & Ocampo, new species**

(Figs. 23–24, 29)

Type material. Holotype male at CMNC labeled: “ECU:Pich; 47KmS / Sto.Domingo, RioPalenque / 5.V-25.VII.85, S&J Peck / 250 m, malaise-FIT / rainforest””, “*Eideria / glabripennis / Neita and Ocampo / HOLOTYPE*” (red label). Two male paratypes at CMNC labeled: “**Ecuador**, 700 / Río Palenque / 47 km. S. St. / Domingo / Feb. 22 1976 / H. & A. Howden.” Fifty-two paratypes (41 at CMNC, nine at IAZA, two at MLPA) labeled: “ECU:Pich; 47KmS / Sto.Domingo, RioPalenque / 5.V-25.VII.85, S&J Peck / 250 m, malaise-FIT / rainforest.” All paratypes labeled: “*Eideria / glabripennis / Neita and Ocampo / PARATYPE*” (yellow label).

Type locality. **Ecuador**, Pichincha, 47 km south of Santo Domingo, Río Palenque.

Description of holotype. Length 8.46 mm; width: 4.18 mm. Head, pronotum, elytra, venter, and legs dark brown. *Head* (Fig. 23): Surface convex, densely punctate, ocellate, punctures setose, large (0.06–0.08 mm), interocular width 0.7 mm. Eye canthus truncate, setose; setae moderately dense, slender, long. Frontoclypeal suture evident, complete. Clypeus broadly rounded; surface concave, densely punctate; punctures moderate in size (0.04–0.06 mm) (Fig. 23). Clypeal margin reflexed, shape broadly. Clypeal ventral surface setose; setae slender, long. Mandibles poorly developed on the incisive and molar area. Labrum poorly developed, conical, setose; setae moderately long. Labium poorly developed, ligule prominent. Maxillae with galea poorly developed, lacinia not developed, maxillary palpus with 4 palpomeres, palpomere 4 as long as 1–3 combined. Antennae with 9 antennomeres; antennomere 1 robust; antennomere 2 globose; antennomeres 3 and 4 similar to length, with base cylindrical, apices broad; antennal club with 5 antennomeres, with few setae.

Pronotum (Fig. 23): Convex, wider than long at middle. Surface densely punctate, punctures ocellate, setose, moderate in size (0.042–0.064 mm). Marginal bead present; anterior margin concave; lateral margins slightly angulate, setose, setae hair-like, long; posterior margin slightly defined at middle. Anterior angles rounded; posterior angles broadly rounded. *Scutellum* (Fig. 23): Surface opaque, densely punctate, setose; punctures ocellate, moderate in size (0.040–0.053 mm), scutellar apex rounded. *Elytra* (Fig. 23): Convex, elongate, subparallel. Surface opaque, densely punctate, setose; punctures moderate in size (0.040–0.082 mm); setae long, hair like. Elytra with 5 striate. Elytral margins setose; setae long, hair-like. *Hind wings:* Subcostal and radial vein well sclerotized, not reaching radial sector vein at wing apex; radial sector vein forked at apex; medial vein well developed; medial loop short; cubital vein slightly sclerotized apically from medial loop connection; anal veins 1, 2 not connected, not forming a basal cell. *Venter:* prosternal process absent, on the side slightly concave, surface densely setose; setae slender short, tawny. Mesosternal surface sparsely setose, slightly concave in its middle. Metasternal surface densely punctate, punctures ocellate, setose; setae slender and long; metasternal apex divergent. Propygidium slightly convex at middle. *Pygidium:* recumbent, surface densely punctate, punctures ocellate; setose, setae moderately long, slender. *Legs:* coxae sparsely setose, setae long. Femoral surface sparsely setose, setae long. Protibia with 3 teeth; basal tooth small, surface with line of setae from base to apex. Mesotibiae and metatibiae with medial transverse carinae, carina with 6–8 spine-like setae; apices semicircular, transversely truncate. Tarsal claws bifurcated, symmetrical, short, and thick. *Genitalia* (Figs. 24a–b): parameres simple, symmetrical, elongate, slender, tapered toward apex, without setose sulcus from base to apex on outer margin; parameres shorter than phallobase.

Female. Unknown.

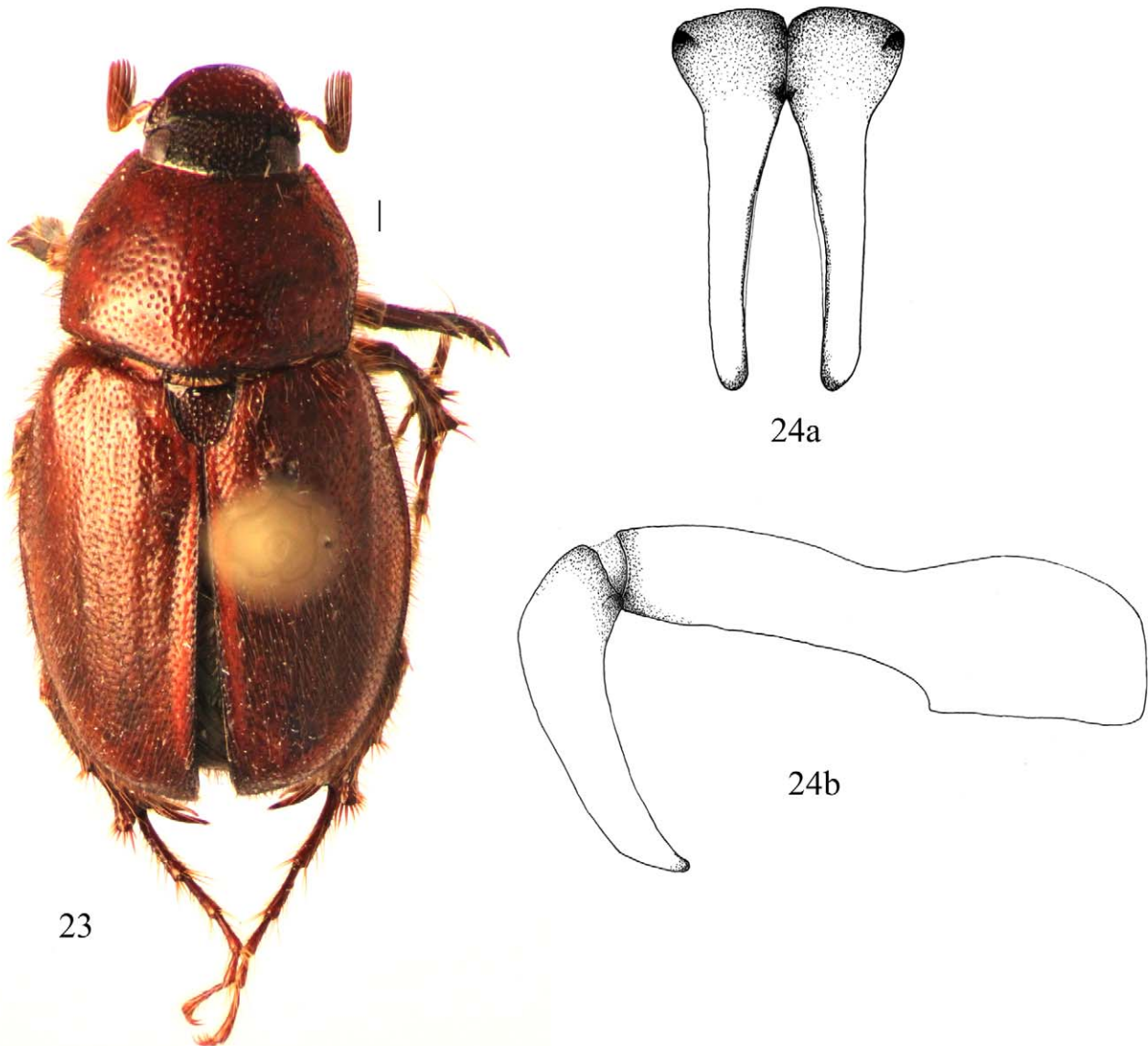


FIGURE 23, 24. *Eideria glabripennis*. 23, habitus of holotype, dorsal view. Scale bar: 0.4 mm; 24, parameres, a) caudal view; b) lateral view.

Variation. The paratypes do not differ significantly from holotype; length ranges from 7.64–8.13 mm, width 3.37–3.74 mm. Some paratypes have elytra that are lighter in color than holotype. The holotype appears to be teneral as it is lighter in color than many of the paratypes.

Distribution. The species is known only from the type locality, the locality corresponds to a tropical rain forest from the inter-Andean valleys of the Andes Mountain, in Río Palenque near Santo Domingo, Pichincha, Ecuador (Fig. 29).

Locality records. (55 adults, male). **Ecuador:** Pichincha, Santo Domingo (47 km S).

Temporal distribution. February and May to July.

Diagnosis. Males of this species are easily distinguished from *E. pentaphylla* and *E. pedroantonioi* by the following combination of characters: elytra with 5 striae, striae widely separated; tarsal claws shorter and thicker than in *E. pentaphylla* and *E. pedroantonioi*; pygidium more densely punctate. The unique form of the parameres and the lack of a setose sulcus from base to apex on outer margin are also diagnostic (the setose sulcus is present in *E. pentaphylla* and *E. pedroantonioi*).

Etymology. From the latin “*glaber*”, meaning absence hairs and -“*penis*”, meaning parameres; used here as referring to the lack of setae on the parameres of this species.

Natural history. All that is known about the natural history of this species is that it has been collected in a rain-forest on the western slope of the Ecuadorian Andes at 497 m.

Eideria pedroantonioi Neita and Ocampo, new species

(Figs. 25–26, 28, 29)

Type material. Holotype male at IAVH labeled: “Colombia, Tolima, Mariquita. / Trampa de Luz. / 5° 15' 00.43” N; 74° 55' 01.71” W. / 380 m. 23-X-2005. Coll. J.C. Neita Leg.”

Type locality. Colombia, Tolima, Mariquita.

Description of holotype. Male. Length 7.83 mm, width 3.81 mm. Head, pronotum, elytra, venter, and legs dark brown. *Head* (Fig. 25): surface convex, setose, densely punctate; punctures small (0.16–0.02 mm); interocular width 0.7 mm. Eye canthus rounded with sparse, long, slender setae. Frontoclypeal suture well defined, complete. Clypeus parabolic; surface concave, densely punctate; punctures moderate in size (0.022–0.040 mm) (Fig. 25). Clypeal margin reflexed. Clypeal ventral surface setose, setae slender and long. Labrum reduced, conical, setose; setae moderately long. Labium with poorly developed ligule, prominent. Maxillae with galea poorly developed, lacinia not developed, maxillary palpus with 4 palpomeres; palpomere 4 as long as 1–3 combined. Antennae with 9 antennomeres; antennomere 1 robust; antennomere 2 globose; antennomeres 3 and 4 with base cylindrical, apex broad; antennal club with 4 antennomeres with few setae (Fig. 25). *Pronotum* (Fig. 25): Convex, wider than long at middle. Surface densely punctate, ocellate, setose; punctures moderate in size (0.02–0.05 mm). Marginal bead present; anterior margin concave, with membrane; lateral margins nearly smooth, setose; setae hair-like, long; posterior margin slightly defined at middle. Anterior angles rounded; posterior angles broadly rounded. *Scutellum* (Fig. 25): Surface opaque, densely punctate, setose; punctures ocellate, moderate in size (0.015–0.025 mm), center smooth; apex rounded. *Elytra* (Fig. 25): convex, elongate, subparallel. Surface opaque, densely punctate, setose; punctures moderate in size (0.04–0.06 mm); setae long, hair like. Elytra with 4 striae, interstriae well developed, wide. Elytral margins setose; setae long, hair-like. *Hind wings*: subcostal and radial veins well sclerotized, not reaching radial sector vein at wing apex; radial sector vein forked at apex; medial vein well developed; medial loop short; cubital vein slightly sclerotized apically from medial loop connection; anal veins 1 and 2 not connected, not forming a basal cell. *Venter*: prosternal process absent; slightly concave on sides, surface with dense setae; setae slender, short, tawny. Mesosternal surface sparsely setose, slightly concave at middle. Metasternal surface densely punctate, ocellate, setose; setae slender, long; metasternal apex divergent at middle. Abdomen with 3 exposed ventrites medially; ventrite V longer than ventrite IV; prepygidium slightly convex at middle. *Pygidium*: recumbent; surface densely punctate; punctures ocellate, setose; setae slender, moderately long. *Legs*: coxae sparsely setose, setae long. Femora with surface sparsely setose, setae long. Protibia with 3 teeth, basal tooth small, dorsal surface with a line of setae from base to apex. Mesotibiae and metatibiae with medial transverse carinae, carinae with 4–5 spine-like setae; apex semicircular, transversely truncate. Tarsal claws bifurcated, symmetrical. *Genitalia* (Figs. 26a-b): parameres simple, symmetrical, elongated, tapered toward apex; parameres shorter than phallobase, with a setose sulcus on outer surface; phallobase slender.

Female. Unknown.

Distribution. The species is known only from the type locality, which is a tropical dry forest from the inter-Andean valleys of Cordillera Oriental in Mariquita, Tolima, Colombia (Fig. 29).

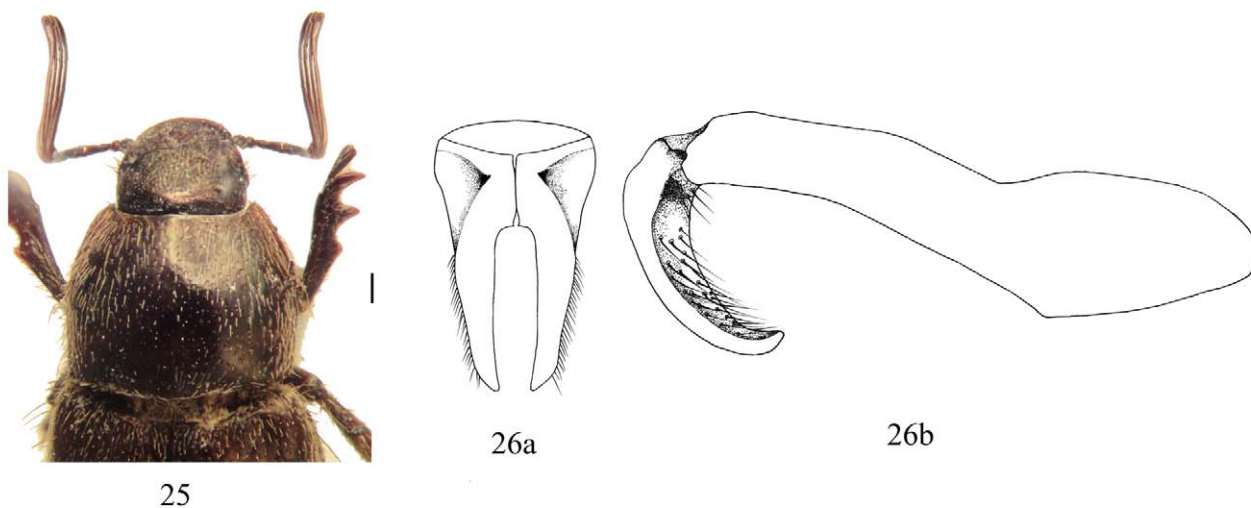
Locality records. (1 adult, male). **Colombia:** Tolima, Mariquita.

Temporal distribution. October.

Diagnosis. Males of this species are easily distinguished from *E. pentaphylla* by the following combination of characters: Antennal club with 4 antennomeres, antennomeres 3–5 slender, cylindrical; antennomeres 3 and 4 similar in length, antennomere 5 longer than 3 and 4; elytra with 4 striae, striae widely separated. The unique form of the parameres, which has a sulcus from base to apex on outer margin, is also diagnostic.

Etymology. We are pleased to name this species after the senior author's (JCN) father Pedro Antonio Neita Rodriguez.

Natural history. All that is known about the natural history of this species is that the only known specimen was attracted to lights in a dry forest in the Colombian Andes at 380 m (Fig. 28).



27

28

FIGURES 25–28. *Eideria pedroantonioi*. 25, pronotum of holotype, dorsal view. Scale bar: 0.4 mm; 26, parameres, a) caudal view; b) lateral view; 27 and 28, habitat.

Key to the species of *Eideria* Neita & Ocampo

- 1. Antennal club with 5 antennomeres 2
- 1'. Antennal club with 4 antennomeres *E. pedroantonioi* Neita & Ocampo
- 2. Elytra with 5 striae, striae widely separated; tarsal claws short and thick; parameres without sulcus from base to apex on outer margin, glabrous *E. glabripennis* Neita & Ocampo
- 2'. Elytra with 8 striae, weakly separated; tarsal claws short and thin; parameres with a sulcus from base to apex on outer margin, setose *E. pentaphylla* Neita & Ocampo

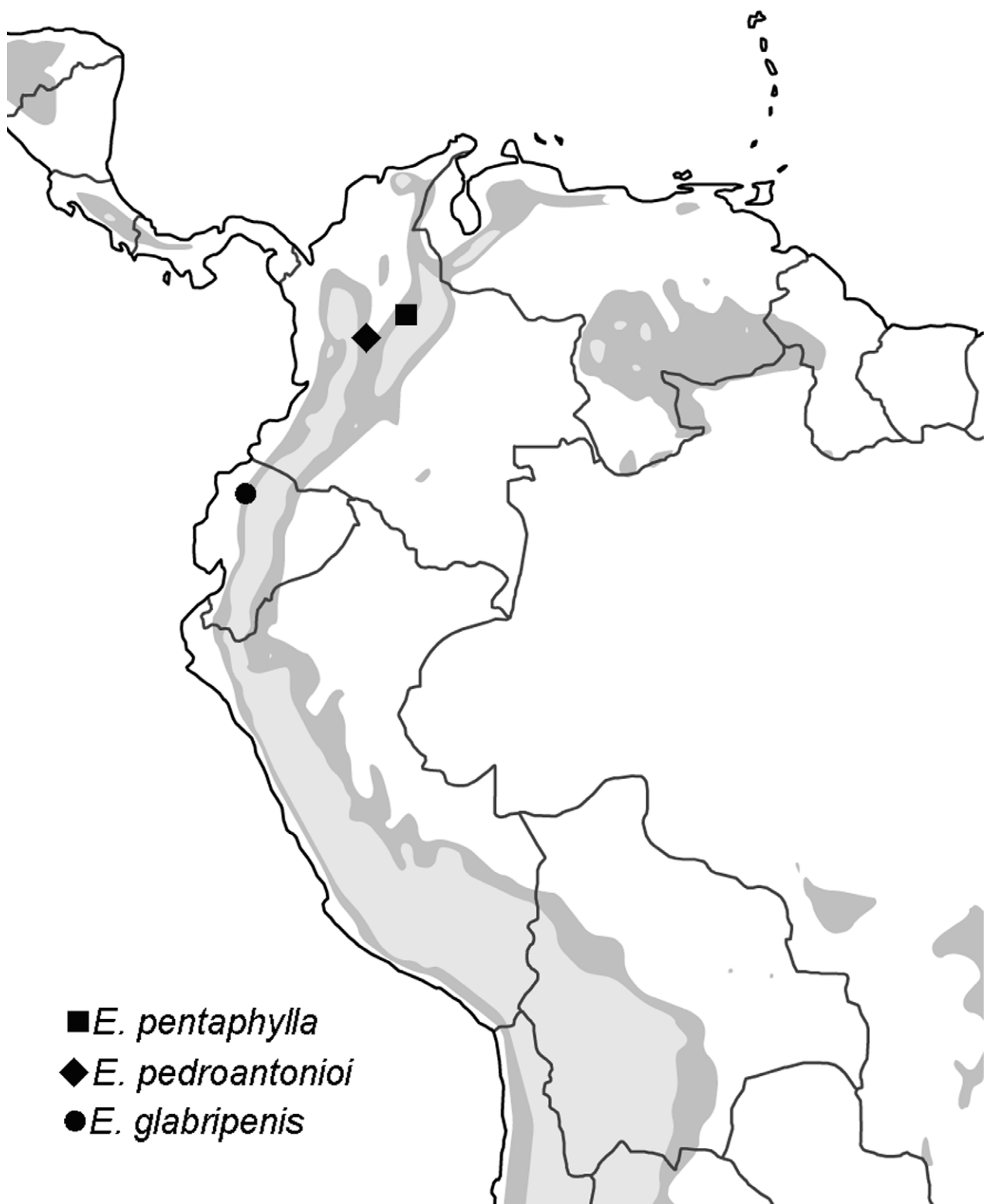


FIGURE 29. Distribution of *Eideria* species.

Acknowledgments

We thank to Erika Vergara and Mónica Ospina (Museo Entomológico, Facultad de Agronomía, Universidad Nacional de Colombia Sede Bogotá) and Claudia Alejandra Medina (IAvH, Villa de Leyva) for making specimens avail-

able for this study. This project was supported through the following grants: CONICET (Consejo Nacional de Investigaciones Científicas y Técnicas, Argentina) PIP #112-200801-01869 and the National Science Foundation, Advances in Biological Informatics # 0743783. FCO thanks CONICET (Argentina) and the Instituto de Ciencias Básicas, Universidad Nacional de Cuyo for the ongoing support of his research. JCN thanks the Organización de Estados Americanos (OEA) for the support of his research through a fellowship award.

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