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Two new species of South America *Neocherentes* Tippmann, 1960
(Coleoptera: Cerambycidae: Lamiinae: Onciderini)

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Two new species of South America *Neocherentes* Tippmann, 1960 (Coleoptera: Cerambycidae: Lamiinae: Onciderini)

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Abstract. Two **new species** of Onciderini Thomson, 1860 (Coleoptera: Cerambycidae: Lamiinae) are described and illustrated: *Neocherentes adrianoi* Nearn and Monné, from Brazil, and *Neocherentes pergeri* Nearn and Monné, from Bolivia. The male of *Neocherentes dilloniorum* Tippmann, 1960 is redescribed and the female is described for the first time. *Neocherentes dilloniorum* is excluded from the Brazilian fauna. A key to the known species of *Neocherentes* Tippmann, 1960 is provided.

Key words. Longhorned beetles; Neotropical region; taxonomy.

Resumen. Dos **nuevas especies** de Onciderini Thomson, 1860 (Coleoptera: Cerambycidae: Lamiinae) son descritas e ilustradas: *Neocherentes adrianoi* Nearn y Monné, de Brasil, y *Neocherentes pergeri* Nearn y Monné, de Bolivia. El macho de *Neocherentes dilloniorum* Tippmann, 1960 es descrito de nuevo y las primeras hembras de la especie son descritas. *Neocherentes dilloniorum* es excluida de la fauna Brasileña. Claves de las especies de *Neocherentes* Tippmann, 1960 son incluidas.

Palabras claves. Escarabajos longicorneos; región neotropical; taxonomía.

Introduction

The monotypic genus *Neocherentes* (Cerambycidae: Lamiinae: Onciderini) was described by Tippmann (1960) for *N. dilloniorum* Tippmann, 1960, based on a single male specimen collected in Cusco, Peru. Specimens of this genus are rarely collected and only eight specimens are known from museum collections. In naming the genus *Neocherentes*, Tippmann was apparently referring to *Cherentes niveilateris* (Thomson, 1868), another onciderine with a distinct pattern formed by curved and sinuate stripes of contrasting colors on the elytra and lateral margins.

Many years ago, the second author discovered a new species of *Neocherentes* from Brazil in the MNRJ collection. Visits to several museum collections in the USA, Brazil, and Europe by the first author revealed additional specimens of this new species. In addition, four specimens of a second new species from Santa Cruz de la Sierra, Bolivia were discovered in the ACMT and RPPC collections. The two new species are described herein and a key to the three known species is provided. The male of *Neocherentes dilloniorum* is redescribed and the female is described for the first time.

Materials and Methods

Specimens of adult *Neocherentes* in the following collections were examined and the following codens are used throughout the paper:

ACMT American Coleoptera Museum (James E. Wappes), San Antonio, TX, USA
FSCA Florida State Collection of Arthropods, Gainesville, FL, USA

MNHN	Muséum national d'Histoire naturelle, Paris, France
MNRJ	Museu Nacional, Rio de Janeiro, Rio de Janeiro, Brazil
MZSP	Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil
NHMB	Naturhistorisches Museum Basel, Basel, Switzerland
NHMW	Naturhistorisches Museum Wien, Vienna, Austria
NMNH	National Museum of Natural History, Smithsonian Institution, Washington, DC, USA
RPPC	Robert Perger, Private collection, Santa Cruz, Bolivia

Observations of specimens were made using a Nikon SMZ18 stereomicroscope with 10× eyepieces. Photographs were taken with Visionary Digital's Passport Storm imaging system fitted with a Canon EOS 50D. Figure plates were edited with the Adobe Photoshop CS5. Distribution maps were created in Esri ArcMap 10.3. Classification and distributional data are based on Monné (2018) and Tavakilian and Chevillotte (2018). Separate labels are separated with a double slash (/).

Taxonomy

Neocherentes Tippmann, 1960

Type species. *Neocherentes dilloniorum* Tippmann, 1960: 156.

The genus *Neocherentes* currently contains a single species. The following key treats all currently known species of *Neocherentes* including two new species described herein.

1. Apical 1/3 of elytra without distinct punctation; mesosternal process medially concave; mesosternum and abdominal sternites with similar coloration and striped pattern as elytra (Fig. 4b, e); usually found in lower elevation habitats, below 1,000 m (Brazil)
 *N. adrianoi* Nearns and Monné, sp. nov.
- Apical 1/3 of elytra with distinct punctation; mesosternal process medially flat; mesosternum and abdominal segments with similar coloration and striped pattern as elytra or not; found in a wide range of elevations **2**
2. Abdominal segments with mottled whitish-grey coloration, without striped pattern as in elytra (Fig. 4c, f); usually found in lower elevation habitats, below 1,000 m (Bolivia)
 *N. pergeri* Nearns and Monné, sp. nov.
- Mesosternum and abdominal segments with similar coloration and striped pattern as elytra (Fig. 4a, d); usually found in high elevation Andean habitats, above 1,000 m (Bolivia, Peru)
 *N. dilloniorum* Tippmann, 1960

Neocherentes dilloniorum Tippmann, 1960: 156

(Fig. 1a–d, 4a, d)

Redescription. Male. Length 11.5–9.0 mm (measured from vertex to elytral apices), width 4.4–4.0 mm (measured across humeri). Habitus as in Fig. 1a. General form elongate-oblong, moderately sized. Integument dark-brown to almost black, with white, gray, ochraceous, testaceous, and dark-brown pubescence; elytra with distinct pattern formed by curved and sinuate stripes of contrasting colors, forming almost an “X” shape extending from humeri to apices; mesosternum and abdominal sternites with similar stripes and colors.

Head. Frons subquadrate, about 4 times width of lower eye lobes. Eyes with lower lobes moderately sized, narrow, elongate; narrowest area connecting upper and lower eye lobes about 2 ommatidia wide. Genae elongate, about 1/2 as tall as lower eye lobes. Antennae distinctly longer than body, surpassing elytral apices by 5 antennomeres; antennal tubercles prominent, widely separated; tubercles armed at apex with short, blunt horn; scape clavate; antennomere III slightly sinuate. Antennal formula based on antennomere III: scape = 0.63; II = 0.18; IV = 0.87; V = 0.62; VI = 0.52; VII = 0.44; VIII = 0.37; IX = 0.36; X = 0.37; XI = 0.38.

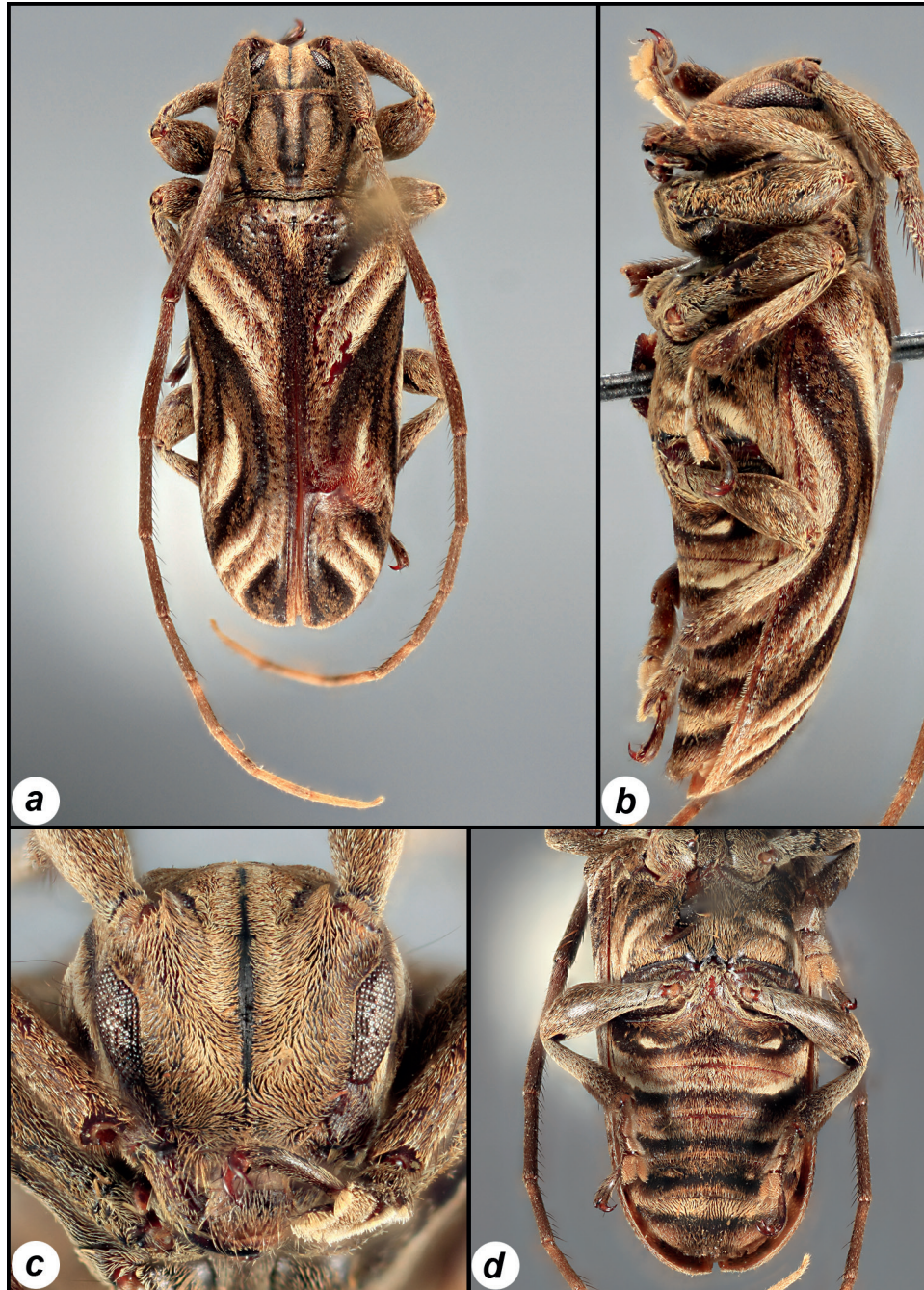


Figure 1. *Neocherentes dilloniorum* Tippmann, 1960, holotype male. **a)** Dorsal habitus. **b)** Lateral habitus. **c)** Close-up of head. **d)** Close-up of abdominal ventrites.

Thorax. Pronotum roughly cylindrical, transverse, about 1.25 times as wide as long; disk densely pubescent, with two large, subround tumescences, one on each side of midline, each tumescence depressed obliquely by shallow furrow; each side of disk with short, glabrous line extending obliquely from base to about basal 1/3. Mesosternal process about 2/3 as wide as mesocoxal cavity, medially flat, emarginate apically. Scutellum transverse, apex rounded. **Elytra.** Slightly more than 2 times as long as width at humeri, about 3.7 times as long as pronotal length, about 1.5 times broader basally than pronotum at its widest (at base); lateral margins slightly attenuate, gradually rounded to apices at apical 1/3, apices

jointly rounded; basal 1/2 with moderately dense, moderately deep punctation; humeri prominent, anterior margin arcuate. **Legs.** Short; femora robust; metafemora clavate apically; tibiae slightly expanded apically; metafemora about 1/3 as long as elytra; tarsomere V about as long as I–IV combined. Procoxae large, globose; apex of prosternal process subtriangular.

Abdomen. Fifth abdominal ventrite about 1.25 times longer than IV.

Female. Length 13.0–9.0 mm (measured from vertex to elytral apices), width 5.3–3.7 mm (measured across humeri). Similar to male except antennae slightly longer than body; antennomeres X and XI decreasing in length compared to IX; basal 1/3 of profemora not transversely rugose; ventrite V with a median triangular impression.

Material examined. Holotype, ♂, PERU, Cusco, Cosñipata, 1700 m, XII 1951 F. Woytkowski // *Neocherentes dilloniorum* F. Tippmann, Wien ♂ // Typus // BLNO000671 (NMNH). Four ♀♀, BOLIVIA, Cochabamba, Museum Frey Tutzing (NHMB); 1 ♀, BOLIVIA, Sur - Yungas, Chulumani, I-48, Bridarolli // Coleção J.M. Bosq (MNRJ); 1 ♂, BOLIVIA, Sur - Yungas, Chulumani, I-48, Williner // Coleção J.M. Bosq (MNRJ); 1 ♀, PERU, S.A., 1940 10.28, F. Woytkowski, No. 4110 // Dept. Junin, Prov. Tarma, Loc. Vitoc, 1400 m.a.s.l. (MZSP).

Diagnosis and remarks. *Neocherentes dilloniorum* can be separated from its congeners by the following combination of characters: apical 1/3 of elytra with punctation, mesosternal process medially flat, and mesosternum and abdominal sternites with distinct striped pattern similar to dorsal surface (Fig. 4a, d). This species is known from a total of eight specimens (2 males, 6 females). All known specimens of this species were collected in Peru and Bolivia (Fig. 5) at relatively high elevation (1,400–2,558 m). Monné (2005) was the first to report this species from Bolivia, followed by Wappes et al. (2006). Lingafelter et al. (2014) provided color photographs of the holotype specimen.

Neocherentes adrianoi Nearns and Monné, sp. nov.

(Fig. 2a–d, 4b, e)

Neocherentes dilloniorum; Nearns and Swift (2011)

Description. Female. Length 15.0–14.0 mm (measured from vertex to elytral apices), width 6.0–5.4 mm (measured across humeri). Habitus as in Fig. 2a. General form elongate-oblong, moderately sized. Integument dark-brown to almost black, with white, gray, ochraceous, testaceous, and dark-brown pubescence; elytra with distinct pattern formed by curved and sinuate stripes of contrasting colors, forming almost an “X” shape extending from humeri to apices; mesosternum and abdominal sternites with similar stripes and colors.

Head. Frons subquadrate, about 4 times width of lower eye lobes. Eyes with lower lobes moderately sized, narrow, elongate; narrowest area connecting upper and lower eye lobes about 2 ommatidia wide. Genae elongate, about 1/2 as tall as lower eye lobes. Antennae slightly longer than body; antennal tubercles prominent, widely separated; tubercles not armed at apex; scape clavate; antennomere III moderately sinuate. Antennal formula based on antennomere III: scape = 0.63; II = 0.18; IV = 0.8; V = 0.62; VI = 0.5; VII = 0.44; VIII = 0.34; IX = 0.31; X = 0.22; XI = 0.21.

Thorax. Pronotum roughly cylindrical, transverse, about 1.3 times as wide as long; disk densely pubescent, with two large, subround tumescences, one on each side of midline, each tumescence depressed obliquely by shallow furrow; each side of disk with short, glabrous line extending obliquely from base to about basal 1/3. Mesosternal process nearly as wide as mesocoxal cavity, medially concave, emarginate apically. Scutellum transverse, apex rounded. **Elytra.** About 1.8 times as long as width at humeri, about 3.6 times as long as pronotal length, about 1.5 times broader basally than pronotum at its widest (at base); lateral margins slightly attenuate, gradually rounded to apices at apical 1/3, apices jointly rounded; basal 1/3 with sparse, shallow punctation; humeri prominent, anterior margin arcuate. **Legs.** Short; femora robust; metafemora clavate apically; tibiae slightly expanded apically; metafemora about 1/3 as long as elytra; tarsomere V about as long as I–IV combined. Procoxae large, globose; apex of prosternal process subtriangular.

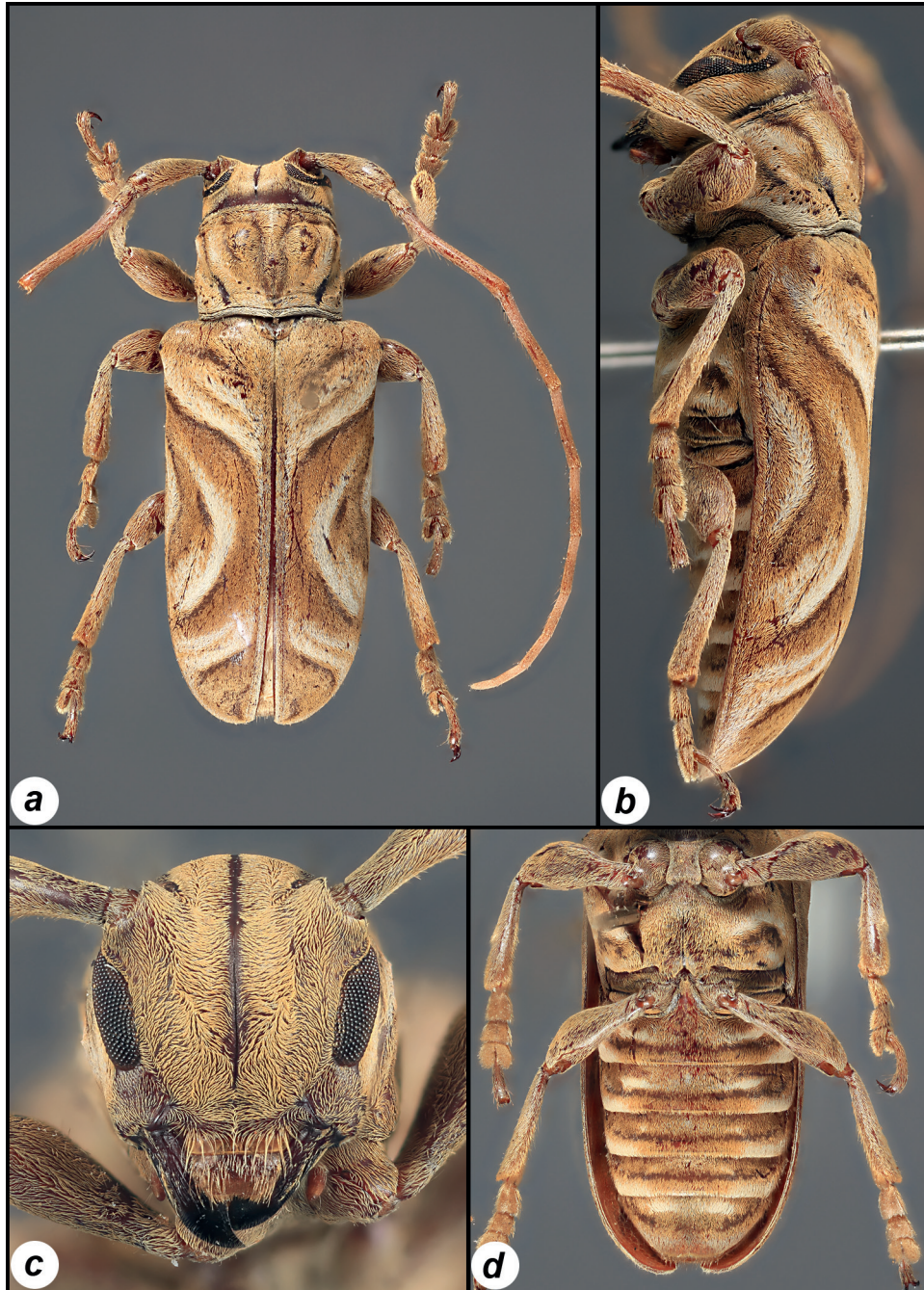


Figure 2. *Neocherentes adrianoi* sp. nov., holotype female. **a)** Dorsal habitus. **b)** Lateral habitus. **c)** Close-up of head. **d)** Close-up of abdominal ventrites.

Abdomen. Fifth abdominal ventrite with a median triangular impression; ventrite V about 1.5 times longer than IV.

Male. Length 12.0 mm (measured from vertex to elytral apices), width 4.5 mm (measured across humeri). Similar to female except antennae distinctly longer than body, surpassing elytral apices by 4 antennomeres; antennal tubercles armed with short, blunt horns; basal 1/3 of profemora transversely rugose; ventrite V without a median triangular impression.

Type material. Holotype, ♀ (Fig. 2a–d), BRAZIL: Espírito Santo, Linhares, Maio 1970, Fragoso // Coleção Fragoso // comp. con foto de holotipo de *Paracherentes ferruginea* Breun. MNHN Paris (MNRJ). Allotype, ♂, BRAZIL: Rio, Riachuelo, vii 1932, M. Souza Gomes coll. (MNRJ). Two paratypes, 1 ♀ BRAZIL: Minas Geras, Mar de Hespanha (MNHN); 1 ♀, “*Shtt*” [handwritten label on green paper] (NHMW).

Etymology. This species is named in memory of the late José Adriano Giorgi (1970–2018), longhorned beetle expert and friend, who will be missed. The epithet is a noun in the genitive case.

Diagnosis and remarks. *Neocherentes adrianoi* can be separated from its congeners by the combination of the following characters: apical 1/3 of elytra without punctation, mesosternal process medially concave, and mesosternum and abdominal sternites with distinct striped pattern similar to dorsal surface (Fig. 4b, e). In both *N. dilloniorum* and *N. pergeri*, the apical 1/3 of elytra has punctation and the mesosternal process is flat. This species is described from four specimens (one male, three females), three of which were collected in Brazil from near sea level to approximately 500 m (Fig. 5). One of the two female paratypes (NHMW) contains only a handwritten label on green paper which reads “*Shtt*,” which we believe is short for Heinrich Wilhelm Schott (1794–1865), Austrian botanist and royal gardener who spent many years in Brazil (1817–1821) collecting specimens (Antonio Santos-Silva, pers. comm.). The late Stephen Breuning recognized the Mar de Hespanha (Minas Gerais) female paratype (MNHN) as distinct from *N. dilloniorum*, which he labeled with the manuscript name “*Paracherentes ferruginea*.” To the best of our knowledge, this name was never published. The female holotype from Linhares (Espírito Santo) was incorrectly listed as a male *N. dilloniorum* by Nearns and Swift (2011), in recording a new country record for Brazil. Accordingly, *N. dilloniorum* is formally excluded from the Brazilian fauna.

***Neocherentes pergeri* Nearns and Monné, sp. nov.**

(Fig. 3a–d, 4c, f)

Description. Female. Length 14.0–13.1 mm (measured from vertex to elytral apices), width 6.0 mm (measured across humeri). Habitus as in Fig. 3a. General form elongate-oblong, moderately sized. Integument dark-brown to almost black, with white, gray, ochraceous, testaceous, and dark-brown pubescence; elytra with distinct pattern formed by curved and sinuate stripes of contrasting colors, forming almost an “X” shape extending from humeri to apices; mesosternum and abdominal sternites with similar stripes and colors.

Head. Frons subquadrate, about 4.5 times width of lower eye lobes. Eyes with lower lobes moderately sized, narrow, elongate; narrowest area connecting upper and lower eye lobes about 2 ommatidia wide. Genae elongate, nearly 2/3 as tall as lower eye lobes. Antennae slightly longer than body; antennal tubercles prominent, widely separated; tubercles not armed at apex; scape clavate; antennomere III moderately sinuate. Antennal formula based on antennomere III: scape = 0.56; II = 0.16; IV = 0.84; V = 0.62; VI = 0.44; VII = 0.38; VIII = 0.35; IX = 0.33; X = 0.28; XI = 0.26.

Thorax. Pronotum roughly cylindrical, transverse, about 1.25 times as wide as long; disk densely pubescent, with two large, subround tumescences, one on each side of midline, each tumescence depressed obliquely by shallow furrow; each side of disk with short, glabrous line extending obliquely from base to about basal 1/3. Mesosternal process nearly as wide as mesocoxal cavity, medially flat, emarginate apically. Scutellum transverse, apex rounded. **Elytra.** About 1.6 times as long as width at humeri, about 3.3 times as long as pronotal length, about 1.6 times broader basally than pronotum at its widest (at base); lateral margins slightly attenuate, gradually rounded to apices at apical 1/3, apices jointly rounded; basal 1/3 with sparse, shallow punctation; humeri prominent, anterior margin arcuate. **Legs.** Short; femora robust; metafemora clavate apically; tibiae slightly expanded apically; metafemora about 1/3 as long as elytra; tarsomere V about as long as I–IV combined. Procoxae large, globose; apex of prosternal process subtriangular.

Abdomen. Fifth abdominal ventrite with a median triangular impression; ventrite V nearly 2 times longer than IV.

Male. Length 11.3–10.5 mm (measured from vertex to elytral apices), width approx. 4.4 mm (measured

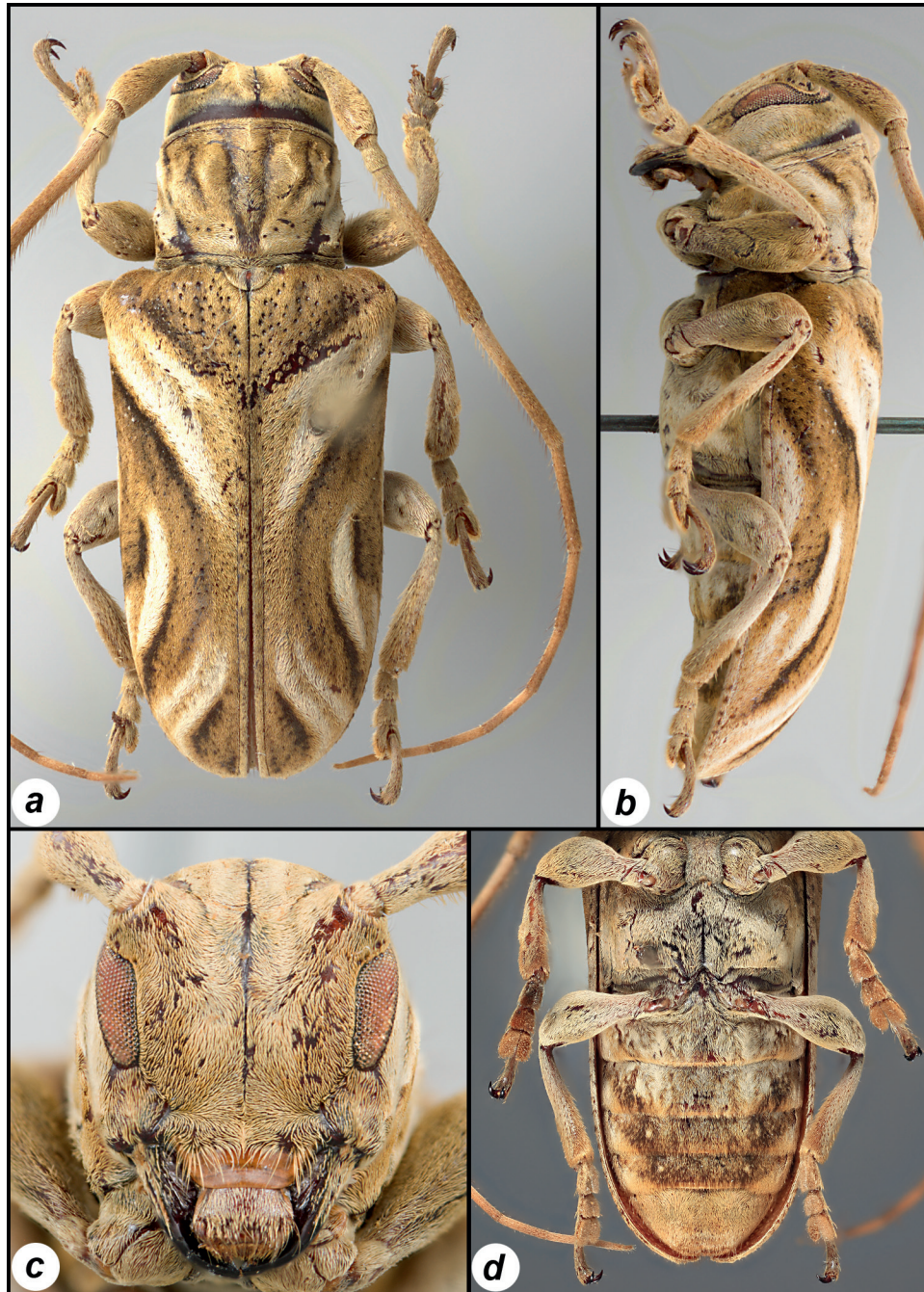


Figure 3. *Neocherentes pergeri* sp. nov., holotype male. **a)** Dorsal habitus. **b)** Lateral habitus. **c)** Close-up of head. **d)** Close-up of abdominal ventrites.

across humeri). Similar to male except antennae distinctly longer than body, surpassing elytral apices by 5 antennomeres; antennal tubercles armed with short, blunt horns; basal 1/3 of profemora transversely rugose.

Type material. Holotype, ♀, BOLIVIA, Santa Cruz de la Sierra, Buena Vista, Nov.–Dec. 1992, R. Clarke, coll. (ex ACMT, to be deposited in NMNH). Allotype, ♀, BOLIVIA, Santa Cruz de la Sierra, Potrerillos del Guendá; 17°40.26' S, 63°27.44' W, 9–29-XI-2006, B.K. Dozier collector (FSCA). Two paratypes, 1 ♂

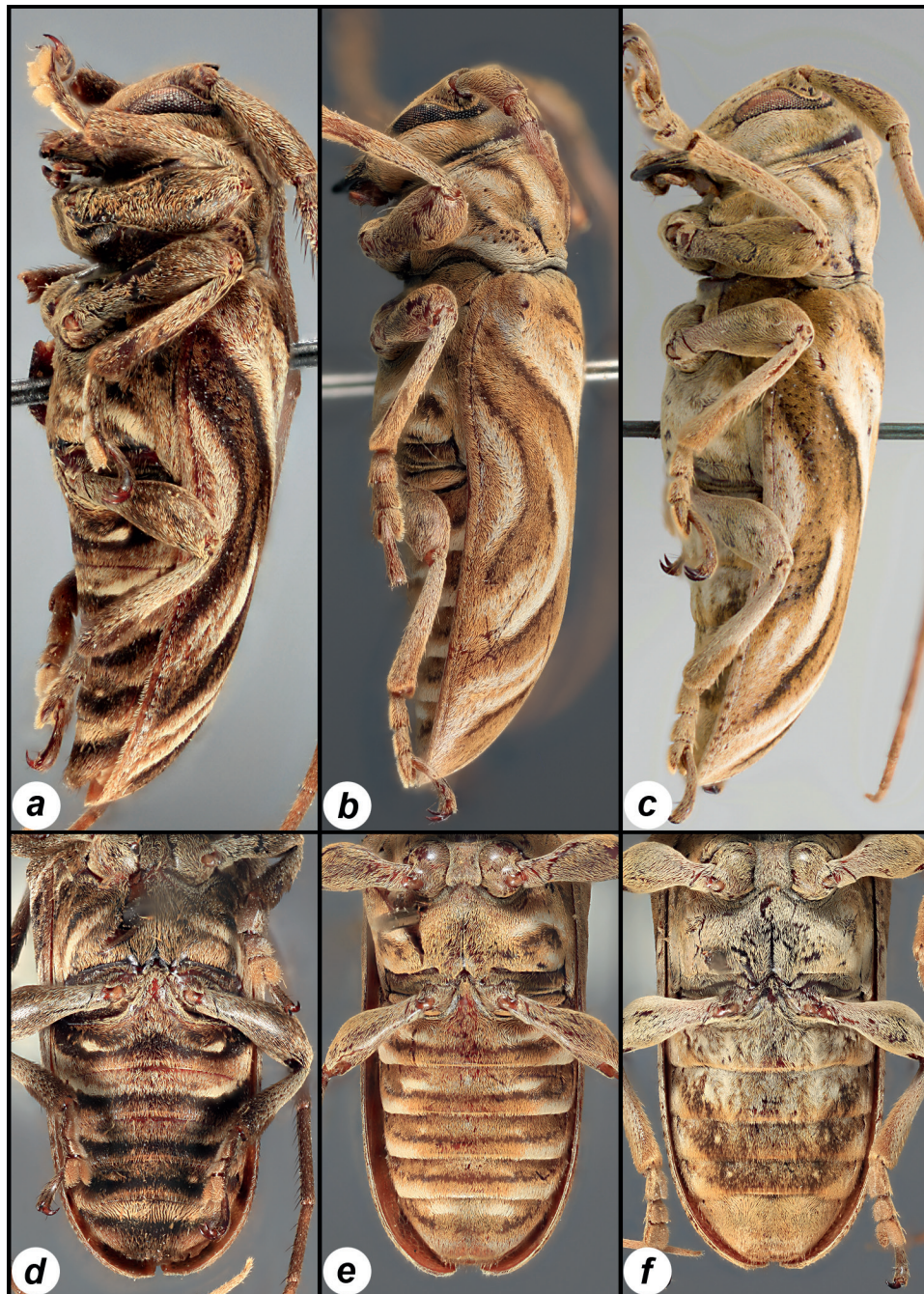


Figure 4. Three species of *Neocherentes* Tippmann, 1960, holotype specimens. **a)** *N. dilloniolum*, lateral view. **b)** *N. adrianoi*, lateral view. **c)** *N. pergeri*, lateral view. **d)** *N. dilloniolum*, close-up of abdominal ventrites. **e)** *N. adrianoi*, close-up of abdominal ventrites. **f)** *N. pergeri*, close-up of abdominal ventrites.

and 1 ♀, BOLIVIA, Santa Cruz: La Guardia (pre-Andean Chiquitano forest; 17°52'59" S, 63°19'04" W; 480 m a.s.l.), XI–XII.2015, beating tray, R. Perger col. (RPPC).

Etymology. This species is named for our friend Robert Perger (Santa Cruz de la Sierra, Bolivia), who collected part of the type series, for his spirit of collaboration and contributions to the study of Neotropical longhorned beetles. The epithet is a noun in the genitive case.



Figure 5. Partial map of South America showing the approximate distribution of three species of *Neocherentes* Tippmann, 1960. *Neocherentes dilloniorum* (red squares), *Neocherentes adrianoi* sp. nov. (magenta diamonds), *Neocherentes pergeri* sp. nov. (blue circles).

Diagnosis and remarks. *Neocherentes pergeri* can easily be separated from its congeners by the metasternum and abdominal ventrites with mottled whitish-grey coloration (in *N. dilloniorum* and *N. adrianoi*, the metasternum and abdominal ventrites continue the distinct pattern found on the elytra (Fig. 4c, f)). This species is known from four specimens (one male, three females) collected in pre-Andean Chiquitano transition forest in Santa Cruz de la Sierra, Bolivia at approximately 480 m (Fig. 5). Nothing is known about the biology of this species. The allotype male of this species was recently figured in a beautifully illustrated photographic guide to longhorned beetles of Bolivia by Lingafelter et al. (2017) as *N. dilloniorum*.

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into the mysterious label from the NHWM collection and Ian P. Swift (Irvine, CA, USA) for providing distribution maps. Antonio Santos-Silva and Francisco E. de L. Nascimento (MZSP) provided critical reviews to an earlier version of this manuscript. Opinions expressed in this article do not necessarily represent the policies of the U.S. Department of Agriculture.

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