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Notes on some species of *Myzomorphus* Sallé, 1850
(Coleoptera, Cerambycidae, Prioninae, Anacolini)

Amoret Spooner
Hope Entomological Collections, Life Collections
Oxford University Museum of Natural History
Parks Road, Oxford, OX1 3PW, U.K.

Antonio Santos-Silva
Museu de Zoologia
Universidade de São Paulo
São Paulo, SP, Brazil

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Amoret Spooner and Antonio Santos-Silva
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Amoret Spooner

Hope Entomological Collections, Life Collections
Oxford University Museum of Natural History
Parks Road, Oxford, OX1 3PW, U.K.
amoret.spooner@oum.ox.ac.uk

Antonio Santos-Silva

Museu de Zoologia
Universidade de São Paulo
São Paulo, SP, Brazil
toncriss@uol.com.br

Abstract. Notes on the type of *Myzomorphus quadripunctatus* (Gray, 1831) are provided, and a lectotype is designated for the species. The holotype male of *M. poultoni* Lameere, 1912, along with a second male, are figured for the first time, and compared with *M. gounellei* Lameere, 1912. Notes on *Myzomorphus amabilis* (Tippmann, 1960) and a key to known males of *Myzomorphus* are also provided.

Key Words. Lectotype, Neotropical Region, syntypes, taxonomy.

Introduction

Review of specimens of the genus *Myzomorphus* Sallé, 1850 deposited in the Oxford University Museum of Natural History (OUMNH) collection resulted in the discovery of type specimens of two species that were previously thought lost: *M. poultoni* Lameere, 1912; and *M. quadripunctatus* (Gray, 1831). Additionally, a probable misidentification of *M. amabilis* (Tippmann, 1960) was discovered.

Currently, *Myzomorphus* includes nine species (one in press), distributed in Central (two species) and South America (eight species) with only *M. scutellatus* Sallé, 1850 recorded from both regions. Females of *M. poultoni* Lameere, 1912 and *M. sparsimflabellatus* Zajciw, 1963, and males of *M. herteli* Gilmour, 1960 and *M. n. sp.* Bezark et al., in press, remain unknown.

Material and Methods

The collection acronyms used in this study are as follows:

BMNH — The Natural History Museum, London, United Kingdom;

MNHN — Muséum National d'Histoire Naturelle, Paris, France;

MNRJ — Museu Nacional, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil;

OUMNH — Oxford University Museum of Natural History, "Hope Entomological Collection", Oxford, United Kingdom.

Photographs of the lectotype female of *Anacolus quadripunctatus* and the holotype male of *Myzomorphus poultoni* were taken by Katherine Child at OUMNH. The second male of *M. poultoni* was photographed by the second author at MZSP. Photographs of the syntype male of *M. gounellei* were taken by Jiří Pirki at MNHN, and those of *M. gounellei* from MNRJ by Juan Pablo Botero.

As *Myzomorphus quadripunctatus* has an extensive bibliography, as detailed by Monné (2015), only the original description is provided here.

Material examined. Of *Myzomorphus gounellei* - Photographs of the male and female syntypes (some of them available at Pirki 2015). BRAZIL, São Paulo: São José do Barreiro (Serra da Bocaina 1650 m), male, XI.1968, Alvarenga and Seabra col. (MNRJ).

Of *Myzomorphus poultoni* - BRAZIL, Rio de Janeiro: holotype male (OUMNH); Parque Nacional do Itatiaia (750 m), male, 13-16.X.2011, J. P. Botero, V. Machado, M. Simões, A. Aragão, and R. Souza col. (MNRJ).

Results

Myzomorphus quadripunctatus (Gray, 1831)

(Fig. 1–4)

Anacolus quadripunctatus Gray, 1831: pl. 70, fig. 1.

Myzomorphus quadripunctatus; Monné 2015: 85 (cat.).

Gray (1831) figured and named *Anacolus quadripunctatus* without a description or other information. In 1832, Gray then provided a very short description of the species: “We also insert figures of *Anacolus lugubris* (see p. 99) [*sic*, page 100], which is black and punctate; the elytra do not cover the abdomen, and *A. quadripunctatus*, which is fulvous, with the antennae, tibiae, and elytral spots, black. Both are from Brazil.”

According to Galileo (1987) (translated): “Gray (1831) established the species based on a single female from Brazil, deposited at BMNH” with Monné (2015) and Tavakilian (2015) also indicating the holotype was deposited at BMNH. However, according to M. V. L. Barclay (personal communication) there is no specimen deposited at BMNH identified as “type” of *M. quadripunctatus*. Meanwhile, a specimen deposited at OUMNH agrees perfectly with Gray’s drawing, notably in the size and position of elytral black maculae which brings us to conclude the probable holotype is deposited there. It is also not possible to be sure about the number of specimens at Gray’s disposal when he figured and described the species. According to Recommendation 73F (ICZN 1999): “Where no holotype or syntype was fixed for a nominal species-group taxon established before 2000, and when it is possible that the nominal species-group taxon was based on more than one specimen, an author should proceed as though syntypes may exist and, where appropriate, should designate a lectotype rather than assume a holotype.”

Griffith and Pidgeon (1832: 780) noted that the Oxford collections were used by Gray to describe new species in the “Animal Kingdom”: “It is no less a point of duty than of inclination in the Editors, on closing the present portion of their work, to acknowledge their obligations to John George Children, Esq., and to the Rev. Frederick William Hope, for the very kind and liberal manner in which those gentlemen have allowed so many of the new genera and species in their entomological cabinets to be figured and described in this work [...] Mr. G. R. Gray has selected from the above mentioned collections, and has named and described the several species figured.” Therefore it is reasonable to assume that the specimen was available to Gray.

We here designate as lectotype the female specimen (Fig. 1–3) deposited at OUMNH that was likely the specimen figured in Gray (1831). The specimen has the following labels (Fig. 4):

- (1) White: with one pair of claws glued;
- (2) White (handwriting): Rio;
- (3) White (handwriting): 4 punctata Gray;
- (4) Red (handwriting): *Anacolus 4-punctatus* / G. R. Gray An Kg. / p2. 70.;
- (5) White, bordered with red (printed/handwriting): TYPE / Gray / Gray and Griff / Anim. King / 2. P. 116. T. 70 / [illegible – probably means Fig.] 1 / Coll. Hope Oxon.;
- (6) White, bordered with black (printed/handwriting): TYPE COL: 1730 / *Anacolus / quadripunctatus* / Gray / HOPE DEPT. OXFORD;
- (7) Red (added by us): LECTOTYPE [not present in figure 4].

As seen above, the type locality in the original description is Brazil. However, based on a label of the lectotype, the type locality becomes Rio de Janeiro (Brazil).

***Myzomorphus poultoni* Lameere, 1912**

(Fig. 8–14)

Myzomorphus poultoni Lameere, 1912: 98; 1913: 91; 1919: 169; Melzer 1919: 161; Blackwelder 1946: 557 (checklist); Gilmour 1960: 20; Galileo 1987: 589; Monné and Giesbert 1994: 19 (checklist); Monné 1995: 75 (cat.); 2006: 22 (cat.); 2015: 84 (cat.).

Lameere (1912) described *Myzomorphus poultoni* as follows (translated): “A male from Brazil at the Museum of Oxford. Length of 10 millimeters, reddish-yellow, with the head, sides of thorax, distal half of metafemora and metatibiae dark; the antennae are dark with whitish lamellae; the elytra are dark with a border and the humerus yellowish. The metatibiae are much dilated, foliaceous, as in the next species [*M. gounellei*]. The prosternal process remained wide; the prothorax has no lateral tooth; the pronotum has a central depression limited at both sides by a distinct, smooth and shiny carina. The elytra are short, regularly bent at inner side. The antennae are as long as body, with the lamellae wide and rounded as in previous species [*M. scutellatus* Sallé, 1850; *M. quadripunctatus*]. The punctation is reticulate on the pronotum and elytra.”

The original description by Lameere (1912) does not agree with the holotype (Fig. 8–10) on the following characters: ventral side of the head mostly yellowish; metatibiae yellowish only on basal third; lamellae partially dark; prothorax has distinct lateral tubercle, although is rounded; antennae longer than body (surpass abdominal apex about apex of antennomere X).

According to Galileo (1987) (translated): “Lameere (1912) established the species based on a single male from Brazil belonging to the Oxford Museum. According to information by M. J. Scoble, the holotype is not in “Hope Entomological Collection,” Oxford;” and “*M. poultoni* has hind tibiae strongly foliaceous and developed and smooth tubercles on pronotum, very close to *M. gounellei*. No specimens were examined.” However, the specimen (Fig. 8–11) rediscovered at OUMNH is the holotype, as described by Lameere (1912).

Myzomorphus poultoni (Fig. 8–10, 12–14) and *M. gounellei* Lameere, 1912 (Fig. 5–7, 15–17) share as main features the notably foliaceous metatibiae and the shiny carina on each side of the pronotum. These features together allow for the separation of these species from all other known males in the genus. Lameere (1912) separated the two species in his key (translated): “Antennal process [lamella] wide and short; prosternal process wide; elytra short triangle-shaped in male [conducting to *M. poultoni*] / Antennal process long and slender; prosternal process narrow; elytra elongate in male, not shortened posteriorly, and with expanded margin in female [conducting to *M. gounellei*].” However, the couplet is flawed. Comparing the lamellae in the holotype of *M. poultoni* (Fig. 8–10) with the syntype male of *M. gounellei* (Fig. 15–17), it is possible to see that they are very similar in size and width (not distinctly different as pointed out by Lameere). Comparing the prosternal process, it is possible to see that they have practically the same width. This was confirmed by examination of a male of *M. gounellei* (Fig. 5–6), and a male of *M. poultoni* (Fig. 12–14), both from MNRJ. The only reliable feature to separate these species is the elytral shape: longer (about 3.0 times as long as largest width), more distinctly narrowed toward apex in *M. gounellei*; shorter (about 2.5 times as long as largest width), less narrowed toward apex in *M. poultoni*. As this is the only difference, it is not necessary to redescribe the species, because *M. gounellei* was suitably redescribed by Galileo (1987).

Monné and Monné (2011) reported: “*Myzomorphus scutellatus* Sallé, 1849 / Figures 2A, B.” A reexamination of the photos of the males figured showed that “Figure 2A”, examined by the second author, is a male of *M. gounellei* and is the specimen used to establish the new state record [“Brazil, São Paulo, Serra da Bocaina (São José Barreiro, 1650 m), male, November 1968, Seabra and Alvarenga col. (MNRJ).”]. In Monné’s (2015) catalogue “Fig. 2A and 2B” by Monné and Monné (2011) is referenced for both *M. scutellatus* and *M. gounellei*.

Key to Known Males of *Myzomorphus*

Galileo (1987) provided a key to males of *M. gounellei*, *M. sparsimflabellatus*, *M. quadripunctatus*, and *M. scutellatus*. At that time, males of *M. herteli* Gilmour, 1960, *M. amabilis* (Tippmann, 1960), and

M. flavipes Galileo, 1987 were unknown, and the male of *M. poultoni* was not examined. Later, Galileo and Monné (2003) figured and described the male of *M. flavipes*. Wappes et al. (2013) figured the male of *M. amabilis* without description.

Based on the examination of the holotype of *M. poultoni*, and figure of the male of *M. amabilis* in Wappes et al. (2013), we can now provide an updated key to males of the genus [males of *M. herteli* and *M. n. sp.* Bezark et al. in press, remain unknown]:

1. Metatibiae not foliaceous; prosternal process about as long as wide 4
- Metatibiae distinctly foliaceous; prosternal process longer than wide 2

- 2(1). Pronotum without reniform callosities on each side. Brazil (Espírito Santo) (see Bezark 2015) *M. flavipes* Galileo, 1987
- Pronotum with distinct reniform callosities on each side 3

- 3(2). Elytra elongate, about 3.0 times as long as largest width. Brazil (Minas Gerais, Rio de Janeiro, São Paulo) *M. gounellei* Lameere, 1912
- Elytra proportionally short, about 2.5 times as long as largest width. Brazil (Rio de Janeiro) .
..... *M. poultoni* Lameere, 1912

- 4(1). Prothorax with lateral tubercle rounded at apex. Bolivia (see Bezark 2015)
..... *M. amabilis* (Tippmann, 1960)
- Prothorax with lateral tubercle distinctly acute at apex 5

- 5(4). Metafemora not reaching the abdominal apex; metatibiae not enlarged; elytra subelliptical. Brazil (Rio de Janeiro, São Paulo) (see Bezark 2015)
..... *M. sparsimflabellatus* Zajciw, 1963
- Metafemora long, reaching or surpassing abdominal apex; metatibiae enlarged; elytra subtriangular 6

- 6(5). Elytra widened, together as long as wide. Colombia, Venezuela, French Guiana, Peru, Brazil (Amazonas, Goiás, Bahia, Minas Gerais, Espírito Santo, Rio de Janeiro, São Paulo, Paraná, Santa Catarina) (see Bezark 2015) *M. quadripunctatus* (Gray, 1831)
- Elytra narrowed, together slightly longer than wide. Costa Rica, Colombia, Venezuela, Brazil (Amazonas) (see Bezark 2015) *M. scutellatus* Sallé, 1850

***Myzomorphus amabilis* (Tippmann, 1960)**

Udeteromorphus amabilis Tippmann, 1960: 101.

Myzomorphus flavipes Galileo, 1987: 595; Monné and Giesbert 1994: 19 (checklist); Monné 1995: 74 (cat.); Galileo and Monné 2003: 41 (error of identification); Wappes et al. 2006: 5 (distr.); Monné 2006: 22 (cat.); Wappes et al. 2013: 4 (male and female; dist.); Lingafelter et al. 2014 (holotype); Monné 2015: 84 (cat.).

The original description of the tibiae of *Myzomorphus amabilis* by Tippmann (1960) does not describe the shape of the metatibiae as unusual (translated): “tibiae flat and apically widened (mainly pro- and metatibiae).” Reexamination of the holotype confirmed that the metatibia distinctly narrow, gradually and are slightly enlarged from base to apex (James E. Wappes and Steven W. Lingafelter personal communication).

However, according to Galileo and Monné (2003) (translated): “*Myzomorphus flavipes* together with *M. gounellei* Lameere, 1912 and *M. amabilis* (Tippmann, 1960) have the metatibiae foliaceous. It differs from *M. gounellei* by the pronotum uniformly punctate, without intumescences, and from *M. amabilis* [female] by the metatibiae gradually enlarged from base to apex. In *M. gounellei* the pronotal disc has two smooth intumescences, and in *M. amabilis* [female] the metatibiae are abruptly enlarged

from middle to apex.” This description of the female of *M. amabilis* does not agree with the holotype female (see Bezark 2015; Lingafelter et al. 2015). The male of *M. amabilis* also has the metatibiae as in the holotype female of the species. The information used by Galileo and Monné (2003) was based on Galileo (1987) who discussed the female of the species (translated): “Metatibiae abruptly enlarged at middle, then gradually enlarged toward apex.” Figure 1008 (Fig. 19) by Galileo (1987) agrees perfectly with this description, which was based on a female from Karl-Ernst Hühdepohl’s private collection. Based on the redescription and figures (Fig. 18–19), *M. amabilis sensu* Galileo (1987) may be a different and undescribed species of *Myzomorphus*.

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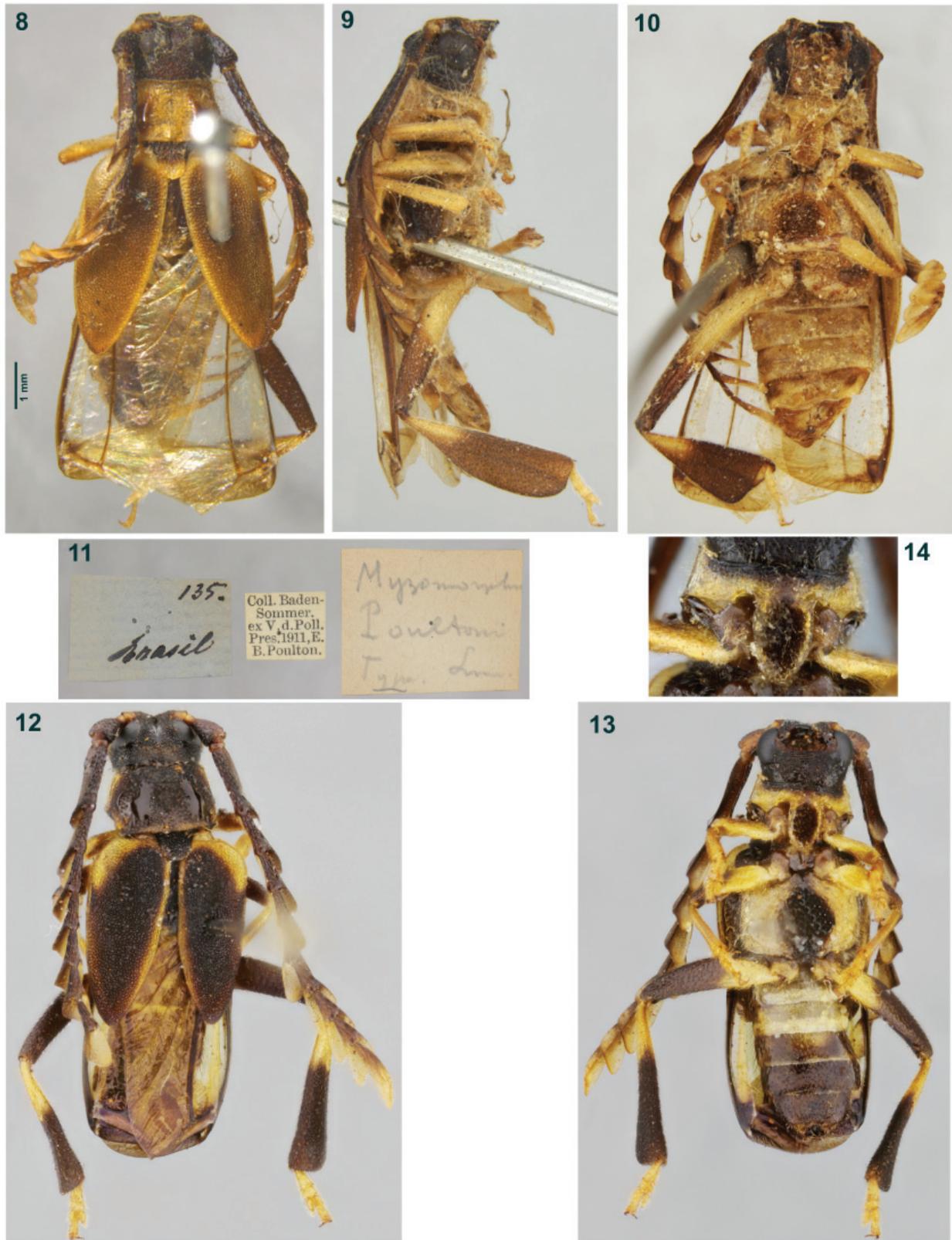
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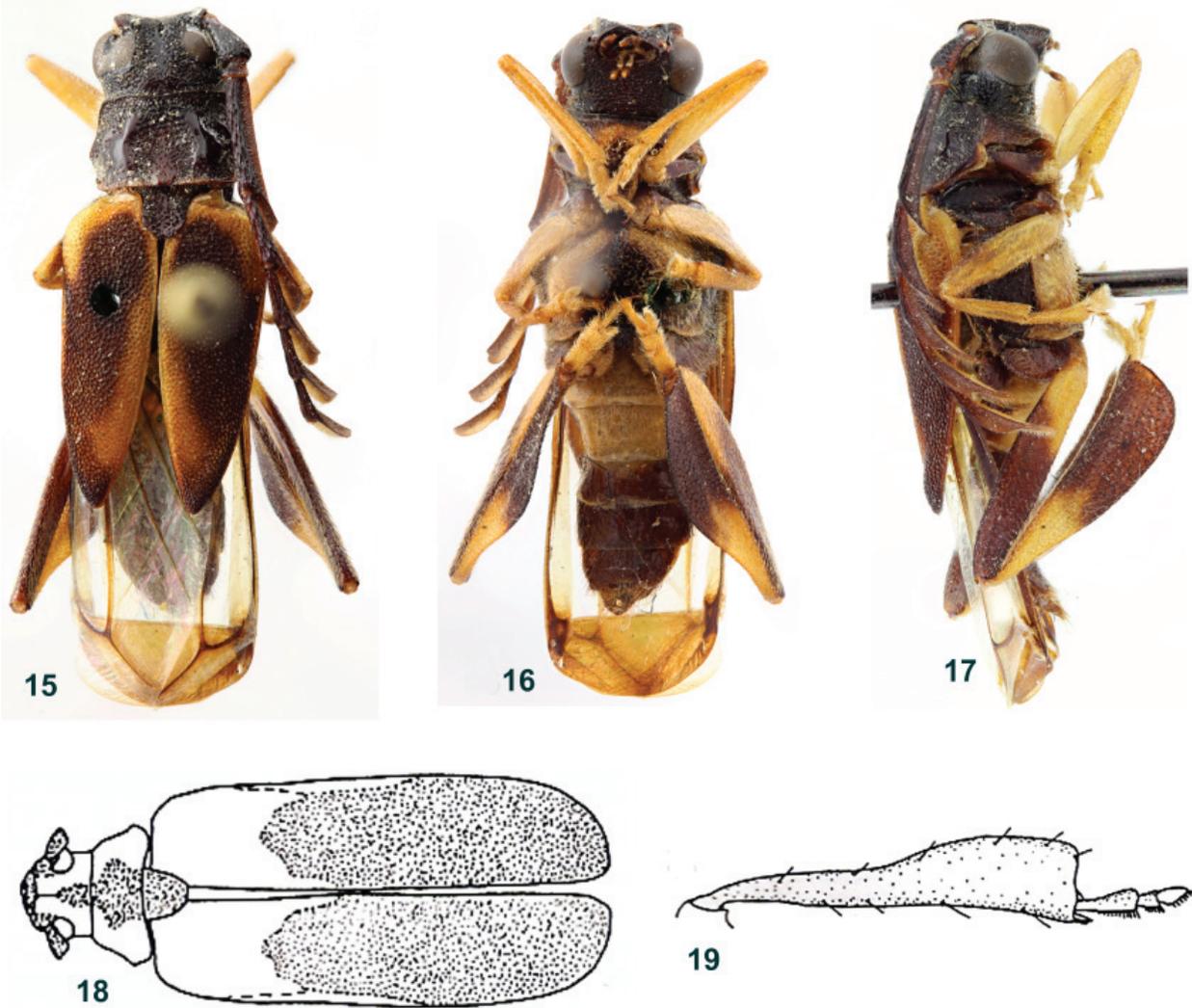
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Figures 1–7. Anacolini spp. 1–4) *Anacolus quadripunctatus*, Lectotype female: 1) Dorsal habitus. 2) Lateral habitus. 3) Ventral habitus. 4) Labels. 5–7) *Myzomorphus gounellei*, male, specimen from MNRJ: 5) Dorsal habitus. 6) Ventral habitus. 7) Metatibia, lateral view. Photographs 5–7 by Juan Pablo Botero.



Figures 8–14. *Myzomorphus* spp. 8–11) *Myzomorphus poultoni*, holotype male: 8) Dorsal habitus. 9) Lateral habitus. 10) Ventral habitus. 11) Labels. 12–14) *Myzomorphus poultoni*, male, specimen from MNRJ: 12) Dorsal habitus. 13) Ventral habitus. 14) Prosternal process.



Figures 15–19. *Myzomorphus* spp. 15–17) *Myzomorphus gounellei*, syntype male: 15) Dorsal habitus. 16) Ventral habitus. 17) Lateral habitus. 18–19) *Myzomorphus amabilis sensu* Galileo (1987), female: 18) Color pattern, schematic. 19) Metatibia.

