

A new genus, a new species and taxonomic notes in Oxycoleini Martins & Galileo, 2003 (Coleoptera, Cerambycidae, Cerambycinae)

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Abstract. *Oxylopsebus* Clarke, 2008 is considered as a junior synonym of *Oxycoleus* Lacordaire, 1868. *Equescollum* is proposed as a new genus for *E. birai* sp. nov. from Costa Rica, which is described and illustrated.

Key-Words. Costa Rica; New species; Synonymy; Taxonomy.

INTRODUCTION

The genus *Oxycoleus* Lacordaire, 1868 was originally described in Molorchini Gistel, 1848. Julio (1997) revised *Oxycoleus* and proposed a key to species of the genus. Later, Martins & Galileo (2003) proposed Oxycoleini to allocate exclusively *Oxycoleus*, especially due to the modified abdomen of the females. Currently, *Oxycoleus* is composed of 14 species distributed in the Neotropical region (Monné, 2018).

Herein, we describe and illustrate *Equescollum* gen. nov. proposed to allocate *E. birai* sp. nov. and *Oxylopsebus* Clarke, 2008 is considered a junior synonym of *Oxycoleus*.

MATERIAL AND METHODS

The photos were taken at Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil (MZSP) with a Canon EOS Rebel T3i DSLR camera (Taichung, Taiwan), Canon MP-E 65 mm f/2.8 1-5X macro lens, controlled by Zerene Stacker AutoMontage software (<http://zerenesystems.com/cms/stacker>). The measurements were taken in millimeters with an ocular Hensoldt/Wetzlar – Mess 10 (Taufkirchen, Germany) in the Leica MZ6 stereomicroscope (Wetzlar, Germany). The plates were produced through Inkscape 0.48.4, edited with the GIMP (GNU Image Manipulation Program). The morphological terms follow Lawrence *et al.* (2010). The taxonomic history follows Monné (2018) and Tavakilian & Chevillotte (2018).

The acronyms used in the text are as follows:

BMNH – The Natural History Museum, London, United Kingdom.

DZUP – Coleção de Entomologia Pe. Jesus Santiago Moure, Departamento de Zoologia, Universidade Federal do Paraná, Paraná, Brazil.

MICR – Museo de Insectos, CIPROC, Escuela de Agronomía, Universidad de Costa Rica.

MZSP – Museu de Zoologia, Universidade de São Paulo, São Paulo, Brazil.

RESULTS

Cerambycinae

Oxycoleini Martins & Galileo, 2003

Oxycoleus Lacordaire, 1868

Oxycoleus Lacordaire, 1868: 484; Bates, 1880: 41; Julio, 1997: 2 (rev.); Martins & Galileo, 2003: 54 (rev.); Monné, 2005: 426 (cat.); Monné, 2012: 42 (cat.); Monné, 2018: 626 (cat.).

Stenoptrellus Bates, 1870: 314; Bates, 1880: 41 (syn.).

Oxylopsebus Clarke, 2008: 62; Monné, 2012: 42 (cat.); Monné, 2018: 628 (cat.). syn. nov.

Remarks

Lacordaire (1868) established *Oxycoleus* to allocate *O. clavipes* Lacordaire 1868 (monotypy),

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and reported on elytral shape (translated): "Elytra slightly longer than half of the abdomen, dehiscent almost from their base, obliquely narrowed at the inner side and very acute apically [...] It is obviously close to the *Stenopterus*, but differs in the shape of the elytra, legs and abdomen of female...". In describing the genus *Stenoptrellus* (currently synonymous of *Oxycoleus*), Bates (1870) also mentioned that his species had dehiscent elytra. Later, Bates (1880) commented on *Oxycoleus*: "A curious genus of the *Molorchina* group, with abbreviated triangular elytra" and synonymized *Oxycoleus* and *Stenoptrellus* with *Merionoeda* Pascoe, 1858.

Gounelle (1911) described *Tethlimena gahani* (currently *Oxycoleus gahani*), and commented on the elytral shape (translated): "...elytral base wider than prothorax, base truncated, subparallel-sided from humeri to about middle, then gradually widened, and then narrowly arched at posterior quarter, sutural angle, obtuse...".

As we can see in the Gounelle's description, the elytral shape of *O. gahani* does not agree with the typical elytral shape (dehiscent), and this probably led other authors to describe species with non-dehiscent elytra in *Oxycoleus*.

Later, Melzer (1933) described a variation of the Gounelle species, *Tethlimena Gahani* var. *tristis* (currently *O. tristis*), and mentioned (translated): "I have a specimen collected by Mr. A. Maller in Mafra (Santa Catarina) which, except for coloring, agrees well with the original description of this species [...] Although the difference in color is remarkable, I think nonetheless that it is only a new variety that I call: var. *tristis*".

Posteriorly, Zajciw (1964) described *Merionoeda (Merionoeda) latipennis*, which was later transferred to *Oxycoleus* by Monné & Giesbert (1992).

Julio (1997) revised the genus and summarized the shape of the elytra as follows (translated): "Elytra reaching or not the abdominal apex, slightly narrowed at middle, dehiscent, carinate (except in *O. obscurus*, *O. tristis* and *O. gahani*). Julio (1997) considered *T. gahani* var. *tristis* as a distinct species, and considered *O. latipennis* Zajciw, 1964 synonymous of *O. tristis*.

Some years later, when proposing Oxycoleini (hitherto composed only by *Oxycoleus*), Martins & Galileo (2003) described the elytral shape as "usually dehiscent".

Oxylopsebus was described by Clarke (2008) to allocate *O. brachypterus* Clarke, 2008. According to the author, *Oxylopsebus* differs specially by the strongly dehiscent elytra and commented: "...apart from the elytra, the differences between *Oxylopsebus* and *Oxycoleus* are less obvious...". The other characteristics mentioned are: "...scape is strongly curved (a character shared with *Oxycoleus tristis*); prosternal process laminiform at base, spatulate at apex and reaching well beyond coxal cavities (not flattened and acuminate, and failing to reach beyond coxal cavities); mesosternal process half as wide as coxae and excavate at apex (not almost as wide as coxae and truncate at apex); legs are very similar in both genera, longer in *Oxycoleus*, but in *Oxylopsebus* the hind legs are considerably larger than the others and all the tibiae curved, not just the metati-

biae as in *Oxycoleus*. Finally, the elytra of the Oxycoleini not only almost cover the abdomen, but also opaque, and closely and coarsely punctured throughout (shortened, semi-translucent, and sparsely punctured in *Oxylopsebus*).

Probably, Clarke (2008) did not have access to other species of the genus, neither photos of the holotypes, and compared its new species only with the species deposited at MZSP (all with non-dehiscent elytra). One evidence of this is the key separating *Oxycoleus* from *Oxylopsebus*. In the former, the elytra would be parallel-sided and almost covering the abdomen, while in *Oxylopsebus*, the elytra would be shorter and acuminate (Clarke, 2008).

We are, therefore, considering the monotypic genus *Oxylopsebus* as synonymous of *Oxycoleus*, because the former has the typical elytral shape of *Oxycoleus* and the other generic characteristics do not separate them.

***Oxycoleus brachypterus* (Clarke, 2008), comb. nov. (Fig. 9)**

Oxylopsebus brachypterus Clarke, 2008: 66, 6 figs; Wappes, Arias & Nearn, 2009: 3 (holotype); Wappes & Arias, 2016: 8 (holotype).

Material examined: Two paratypes: BOLIVIA, Santa Cruz: Hotel Flora & Fauna, 5 km SSE Buena Vista, 17°29'96"S, 63°39'13"W, 420 m, 30.VIII.2005, R. Clarke & S. Zamalloa col., flying to/on flowers of "Barbasquillo" vine (MZSP); female, 08.IX.2005, R. Clarke & S. Zamalloa col., flying to/on flowers of "Barbasquillo" vine (MZSP).

***Equescollum* gen. nov.**

Type species: *Oxycoleus birai* sp. nov., monotypy, present designation.

Etymology: From Latin, Eques (= horseman) and Collum (= neck), referring to the narrative of how the specimen was collected by Bates (1885): "A single specimen of this species flew on to Mr. Champion's neck while he was travelling on horseback through the forest of Chorchá." Neuter gender.

Description: Eyes finely faceted; distance between upper eye lobes at least twice largest width of one upper eye lobe; antennal tubercles slightly, gradually elevate from median groove; antennae 11-segmented, filiform, longer in male, scape with inner spiniform projection at apex.

Prothorax bell-shaped. Pronotum tuberculate. Prosternal process laminiform; procoxal cavities closed behind. Elytra dehiscent, with lateral carina; humeri slightly projected, epipleura gradually reduced posteriorly; elytral apex acuminate.

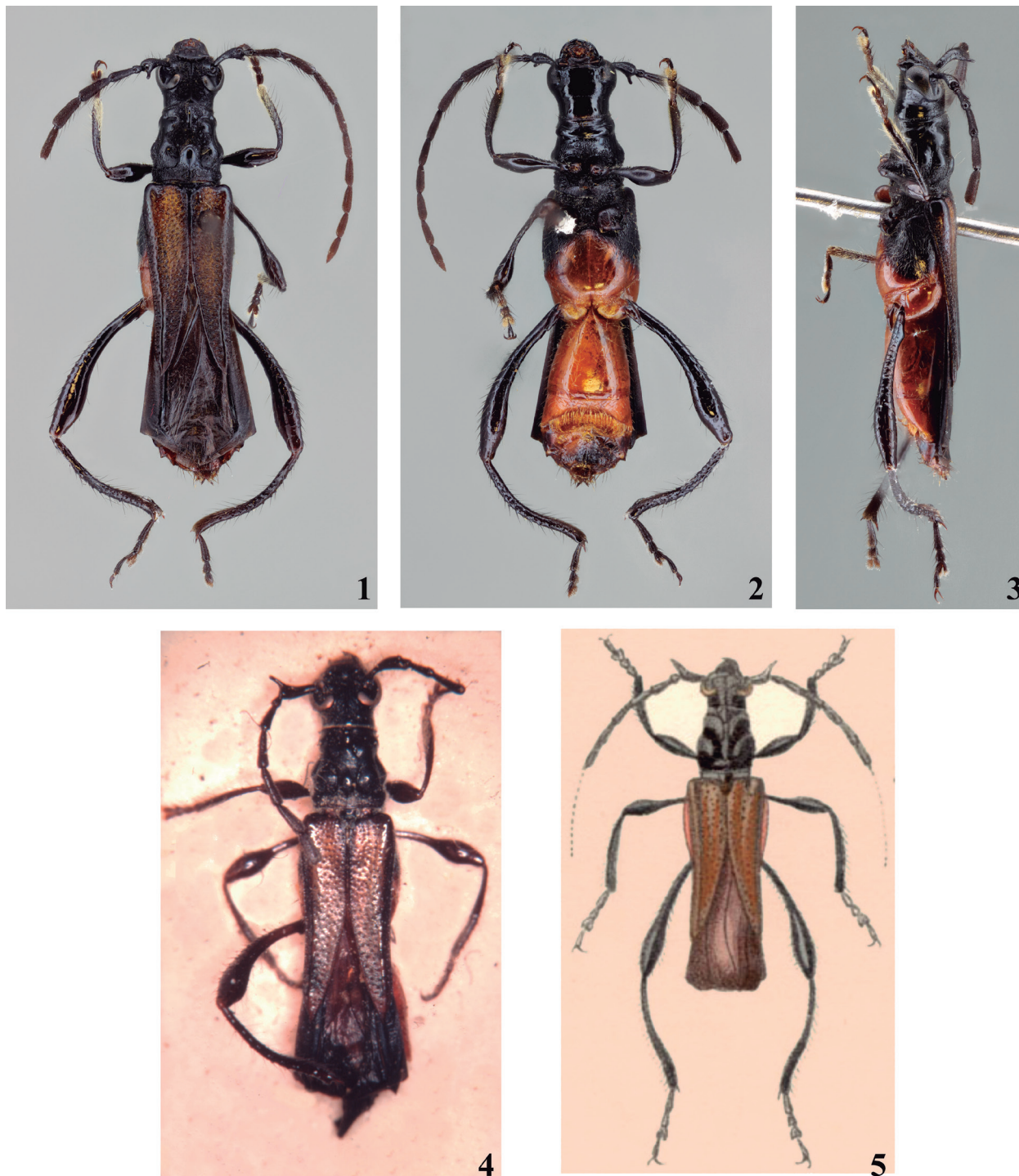
Metafemora and metatibiae with granulated surface, curved at base; femora pedunculate-clavate. Pro- and mesotarsomere I about as long as II+III; metatarsomere I slightly longer than II+III.

Equescollum birai* sp. nov.*(Figs. 1-8; 11)***Merionoeda culicina*; Bates, 1885: 287, pl. 20, fig. 18 (not *Stenoptrellus culicinus* Bates, 1870).

Description: Female. General integument dark brown; flagellomeres brownish; mouthparts (except mandibles) reddish brown; elytra with anterior half light brown, gradually darker toward margins; metaventrite with large reddish-brown triangular shaped area from anterior median margin (between metacoxal cavities), grad-

ually diverging posteriorly, reaching metanepisternum; metacoxae and abdominal ventrites I-II reddish brown, ventrites III-IV reddish brown centrally, gradually dark brown toward margins, V-VI entirely dark brown.

Head: Frons coarsely, densely punctate (except postclypeus), with short thick blackish setae, densely distributed, not obscuring integument, with sparse yellowish setae interspersed; frontoclypeal sulcus deeply marked; postclypeus smooth, setae and punctures sparsely distributed. Median groove deeply marked frontally, from frontoclypeal sulcus to level of posterior margins of an-



Figures 1-5. (1-3) *Equescollum birai*, holotype female: (1) Dorsal habitus; (2) Ventral habitus; (3) Lateral habitus. (4) Slide of the specimen deposited at BNMH; (5) Illustration of the specimen identified as *Oxycoleus culicinus* (from Bates, 1885).

tennal sockets, margins smooth and glabrous. Genae rounded. Labrum slightly brownish toward apex, surface coarsely punctate, with elongate yellowish setae sparsely distributed; maxillary palpomere IV and labial palpomere III securiform; mandibles coarsely, sparsely punctate dorsally. Area between antennal tubercles coarsely punctate, with short blackish setae, densely distributed, not obscuring integument. Area behind upper eye lobes coarsely, densely punctate, punctures sparser than on frons. Gula mentum punctate near lower eye lobes margins, remaining areas glabrous and smooth. Distance between upper eye lobes about 2.5 times largest width of upper eye lobe. Antennae about 1.8 times elytral length, reaching elytral apex, not reaching abdominal apex. Scape gradually widened distally, inner distal side with elongate rhombus projection; sparsely punctate; punctures sparser distally; surface with sparse, short erect blackish setae. Flagellomeres slightly, gradually widened toward apex, XI fusiform; surface with dense brownish pubescence, not obscuring integument; antennomeres III-VI with subdecumbent brownish setae on inner side. Antennal formula (ratio) based on length of antennomere III: scape = 1.43; pedicel = 0.36; IV = 1.43; V = 1.43; VI = 1.29; VII = 1.14; VIII = 1.07; IX = 1.0; X = 0.93; XI = 1.07.

Thorax. Prothorax as long as wide; sides narrowed anteriorly, with slightly raised tubercle; posterior half with elevated tubercle; posterior fifth narrowed. Pronotum with six tubercles: four elliptical, two anterolateral, deeply marked anteriorly, and two posterolateral (largest), deeply marked at inner side and posteriorly; and two median tubercles, an elongate between anterolateral tubercles, and another elliptical, between lateroposterior tubercles. Pronotal disc with blackish pubescence between tubercles, posterior fifth with whitish pubescence. Prosternum transversely elevated at anterior fifth; central area coarsely punctate, with sparse whitish pubescence on central area and on posterior half. Mesoventrite coarsely, confluent punctate, especially on mesoventral process, with short, sparse, subdecumbent whitish setae (not obscuring integument); mesoventral process width about half diameter of mesocoxal cavity, apex semicircularly notched. Mesanepisternum and mesepimeron with fine, sparse punctures, poorly marked, surface with short sparse subdecumbent whitish setae (not obscuring integument). Metaventrite with sparse punctures, poorly marked, with short moderately abundant subdecumbent whitish setae on blackish area (not obscuring integument); reddish-brown area smooth, almost glabrous with sparse subdecumbent whitish setae, especially on anterior median margin; metathoracic disc reaching anterior median margin; metanepisternum with short, moderately abundant, subdecumbent whitish setae interspersed with elongate yellowish setae sparsely distributed. Scutellum length half its width; with whitish pubescence not obscuring integument. **Elytra:** Dehiscent from posterior half; humeri rounded and slightly projected forward; elytral sides with anterior two-thirds gradually convergent, posterior third coplanar with dorsal area, parallel-sided; posterior dorsal half with well-marked carina;

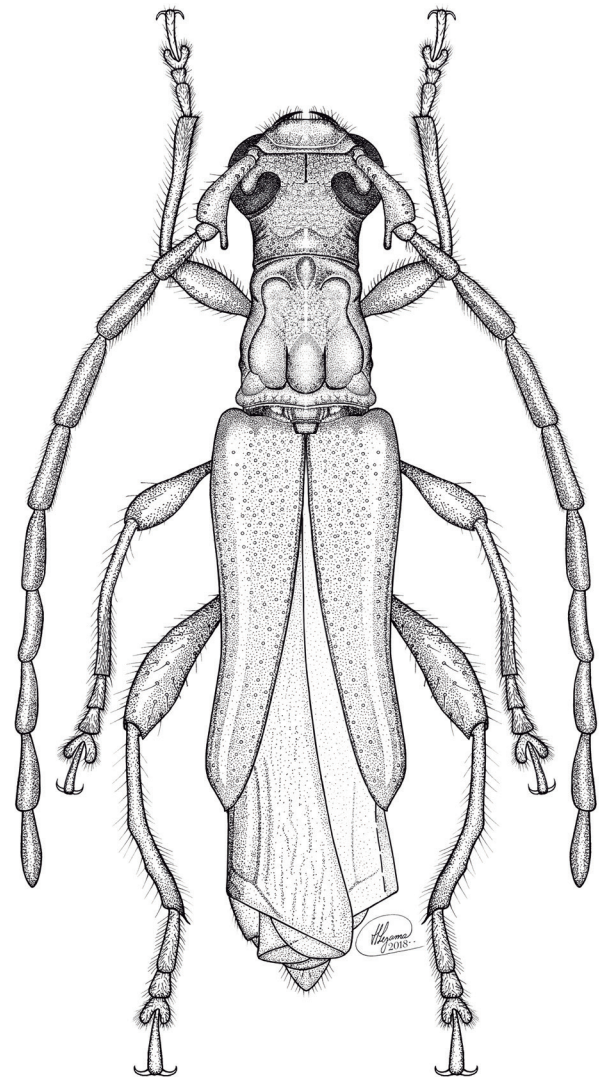
surface coarsely, densely punctate, with sparse whitish pubescence evenly distributed. **Legs:** Coxae with sparse whitish pubescence; profemora with peduncle about one third clava length, meso- and metafemora with peduncle about half clava length; surface with sparse, erect yellowish setae; apex transversely truncate; pro- and mesotibiae with short, decumbent yellowish setae on inner distal half, remaining areas with sparse, erect, elongate brownish setae; metatibiae strongly arched, coarsely granulated-punctate, with sparse, erect, elongate brownish setae.

Abdomen: With 5 ventrites. Ventrites with sparse, erect yellowish setae, denser laterally. Ventrite I length about 2.3 times largest length of ventrite II, gradually widened posteriorly. Ventrite II gradually widened posteriorly, aligned with ventrite I, posterior margin semicircular, about 0.3 length of I laterally, posterior half with transverse semicircular depression, anterior median margin with row of elongate yellowish setae posteriorly directed; sideward with row (about 1/10 the total width of the ventrite) of thicker, longer setae (about twice median setae), strongly arched toward middle; median posterior margin (2/5 the total width of the ventrite) with row of elongate yellowish conchoidal setae; internal area of depression with abundant, thickened, short yellowish conchoidal setae, evenly distributed (not obscuring integument). Ventrite III with sides gradually convergent posteriorly, forming angle at posterolateral area, about half length of II laterally, posterior margin semicircular (posteriorly divergent); large semicircular area (posteriorly divergent) less sclerotized centrally, with row of elongate brownish setae posteriorly, posteriorly directed at anterior margin of less sclerotized area. Ventrite IV trapezoidal, about 0.7 length of III laterally, slightly notched posteriorly, with elongate brownish setae laterally and on posterior margin, remaining area with sparse white pubescence. Ventrite V strongly notched, about half length of IV laterally, with elongate brownish setae laterally.

Male: Antennae about 2.5 times elytral length, surpassing elytral apex, reaching abdominal apex. Abdomen with 6 ventrites, ventrite II without modifications.

Dimensions (mm): Holotype, female, total length, 7.4; prothoracic length, 1.3; anterior prothoracic width, 1.0; posterior prothoracic width, 1.2; widest prothoracic width, 1.3; humeral width, 1.5; elytral length, 3.3. Paratypes, males (n = 2), total length, 5.1-7.0; prothoracic length, 1.0-1.2; anterior prothoracic width, 0.7-0.8; posterior prothoracic width, 0.9-1.0; widest prothoracic width, 1.0-1.1; humeral width, 1.2-1.4; elytral length, 2.4-3.0.

Type material: Holotype female from COSTA RICA, *San José:* Mora El Rodeo (Fila Diamante, 1.000 m), 22.I.2006, M.A. Zumbado LN col. (MZSP). Paratypes, COSTA RICA, *Guanacaste* (3 km SE R. Naranjo), male, 16-31.I.1993, F.D. Parker col. (MZSP). *Puntarenas:* Estación Biológica Las Cruces (OET), San Vito, Coto Brus, 1.000 m, male, 01-05.II.1998, H.J. Lezama & F.T. Hovore col. (MICR); *Península de Osa* (Rancho Quemado), male, I.1993 (Malaise trap), E. Quesada col. (MZSP).



Figures 6-11. (6-8) *Equescollum birai*: (6) holotype female, head; (7-8) paratypes male, respectively dorsal habitus and ventral habitus. (9) *Oxycoleus brachypterus*, dorsal habitus. (10) *Oxycoleus culicinus*, holotype, dorsal habitus. (11) drawing of *Equescollum birai*, dorsal habitus.

Etymology: The new species is named in honor of the late Ubirajara R. Martins de Souza (Bira).

Remarks: Bates (1870) described *Stenoptrellus culicinus* (currently *Oxycoleus culicinus*) based on a single female with elytra pale ochre (Fig. 10). Subsequently, Bates (1885) reported and figured from Panama (Fig. 5) a specimen misidentified as *O. culicinus*. We can notice in the illustration by Bates (1885) that the specimen has a spine-shaped projection in the scape.

Some evidences indicate that a specimen deposited at BNMH (Fig. 4), which was examined through photography at Bezark (2018), and in a slide (made by Pe. Jesus Santiago Moure) is the same specimen used to make the illustration in Bates (1885) (Fig. 5). Its projection is in the same position, at the apex of the scape and is also forwards. However, this projection is located on the inner side of the scape, and the Bates's specimen was badly positioned. It is also possible to note that some antennomeres are absent (Fig. 5), and the same occurs in this specimen, glued on a card. We believe that this specimen collected by Bates (1885) is an undescribed species (described herein).

The presence of projection in the scape is unique in the tribe. However, we find relevant to make some comparisons with some *Oxycoleus* species. *Equescollum birai* differs from the true *O. culicinus* (Fig. 10) [both species identified as *O. culicinus* by Bates (1885)] especially by the presence of projection in the scape (absent in *O. culicinus*). We have specimens of both sexes with projection in the scape; therefore, it cannot be a sexual dimorphism. Besides the shape of scape, the elytra in *Equescollum birai* sp. nov. is light brown on the anterior half, gradually darker toward margins (pale ochre in *O. culicinus*), and strongly acuminate apically (subrounded in *O. culicinus*).

Equescollum birai is similar to *O. brachypterus* (Fig. 9), by the dehiscent elytra, acuminate apically, and by general integument color. Besides the scape, the new species have granulations in the metatibiae (generic features) absent in *O. brachypterus*.

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Authors' contributions statement

The three authors also equally contributed to the identification, description, and illustration present in the work.

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