

Taxonomic notes on *Holcobunus* Roewer, 1910, with descriptions of three new species, and new records for *Holcobunus nigripalpis* Roewer, 1910 (Opiliones: Eupnoi: Sclerosomatidae)

ANA LÚCIA TOURINHO¹, RICARDO PINTO-DA-ROCHA² & CIBELE BRAGAGNOLO³

¹Museum of Comparative Zoology, Department of Organismic and Evolutionary Biology, Harvard University, 26 Oxford Street, Cambridge, Massachusetts 02138, USA. E-mail: amtourinho@gmail.com

²Departamento de Zoologia, Instituto de Biociências, Universidade de São Paulo, Caixa Postal: 11.461, 05422-970, São Paulo, SP, Brazil

³Instituto de Ciências Ambientais, Químicas e Farmacêuticas, Universidade Federal de São Paulo, Rua Prof. Arthur Riedel n° 275, 09972-270, Diadema, SP, Brazil

Abstract

Three new Brazilian species of *Holcobunus* Roewer, 1910 are described, thus increasing the total number of species in the genus to five: *Holcobunus bicornutus* Mello-Leitão, 1940, *H. nigripalpis* Roewer, 1910, *Holcobunus dissimilis* sp. nov. (type locality: Espírito Santo, Santa Teresa, Reserva Biologia Augusto Ruschi), *Holcobunus ibitirama* sp. nov. (type locality: Espírito Santo, Ibitirama, Santa Marta, close to Parque Nacional Caparaó), and *Holcobunus uaisoh* sp. nov. (type locality: Minas Gerais, Fervedouro, Parque Estadual Serra do Brigadeiro). A new record for *Holcobunus nigripalpis* Roewer, 1910 from Minas Gerais is also provided and the morphological variation in both penis and somatic morphology in the genus are presented and discussed. These observations enhance our understanding of both the diversity and distribution of *Holcobunus*.

Key words: Brazil, Neotropics, harvestman, Atlantic Forest, Serra da Mantiqueira, taxonomy, systematics

Introduction

Holcobunus was erected by Roewer (1910) mainly based on its presumed pseudoarticular formula (i.e., 1/3/1/1), a class of characters now regarded as taxonomically unreliable. The genus originally comprised seven nominal species from Brazil, Colombia and Bolivia (Roewer, 1910, 1953), with subsequent addition of species from Honduras, Mexico, Colombia, Bolivia and the Amazon (Roewer, 1953), the Brazilian Atlantic Rain Forest (Mello-Leitão, 1932, 1935, 1938, 1940, 1944), and Chile (Piza, 1942). Based on Roewer's problematic criteria for the classification of Gagrellinae, 14 species were recorded from the Brazilian Atlantic Forest, including the type species, *Holcobunus nigripalpis* Roewer, 1910 (Mello-Leitão, 1932a,b, 1935, 1938, 1944, 1940, 1949; Ringuelet, 1954, 1960; Roewer, 1923, 1953; Piza, 1942).

Ringuelet (1954) suggested that the species included in *Garleppa* should be incorporated in *Holcobunus*, given the pseudoarticular formula of 1/3-4/1/1 in the type species, *Garleppa granulata* Roewer, 1912 (From Bolivia) and 1/3/1/1 for *Holcobunus* (Roewer, 1910, 1923, 1953). However, a taxonomic review of *Holcobunus* from the Brazilian Atlantic Forest (Tourinho & Kury, 2001) revealed the femoral pseudoarticular formula in the *Holcobunus* type-species to be 2/5/2/2-3, not 1/3/1/1. This finding highlights the inadequacy of Roewer's system and conflicts with Ringuelet's proposal to transfer *Garleppa* species to *Holcobunus*.

In addition, Tourinho & Kury (2001) synonymized the single species of *Sympathica* Mello-Leitão, 1933 with *Holcobunus nigripalpis* and transferred *Paratamboicus* Mello-Leitão, 1940 to *Holcobunus*. Eight of the southeastern Brazilian species were removed from the genus; seven were transferred to *Jussara* Mello-Leitão, 1935 (Tourinho-Davis & Kury, 2003) and one to *Abaetetuba* (Tourinho-Davis, 2004). Most species of Neotropical Gagrellinae were examined by the first author, who found the true *Holcobunus* species—*Holcobunus bicornutus* (Mello-Leitão, 1940) and *Holcobunus nigripalpis*—to be restricted to the Atlantic Forest.

In this paper three new species of this genus are described, with all occurring in the Brazilian Atlantic Forest, and a new record for the species *Holcobunus nigripalpis* with comments on the morphological variation of the genitalia is also reported and discussed. The new locality of *Holcobunus* species, Espírito Santo, and the new record of *H. nigripalpis* to Minas Gerais at Serra da Mantiqueira add new data to understand the diversity and the distribution of *Holcobunus* in the Neotropics.

Material and methods

The depositories of examined material are MNRJ (Museu Nacional do Rio de Janeiro) and MZSP (Museu de Zoologia da Universidade de São Paulo). Descriptions, measurements and genitalic preparation followed Tourinho & Kury (2001).

Systematics

Holcobunus Roewer, 1910

Holcobunus Roewer, 1910: 162; 1923: 1069; Mello-Leitão, 1932a: 22; 1938: 333; Ringuelet, 1954: 291; Roewer, 1953: 243; Crawford, 1992: 24; Cokendolpher & Lee, 1993: 8; Tourinho & Kury, 2001: 6. (type species *Holcobunus nigripalpis* Roewer, 1910, by original designation).

Sympathica Mello-Leitão, 1933: 101; Ringuelet, 1953: 39; Roewer, 1953: 254; Ringuelet, 1954: 301; Crawford, 1992: 44. (type species *Sympathica bisignata* Mello-Leitão, by original designation).

Tamboicus (part) Roewer, 1912: 157; 1923: 1073; Mello-Leitão, 1938: 333; Roewer, 1953: 253; Ringuelet, 1954: 304; Crawford, 1992: 44.

Paratamboicus Mello-Leitão, 1940: 97; Roewer, 1953: 255; Ringuelet, 1954: 297; Crawford, 1992: 37. (type species *Paratamboicus bicornutus* by original designation).

Emended diagnosis. Pedipalpal femur, patella and proximal half of tibia black. Eye mound dorsally armed with granules or spines with points either sharp or blunt, located on its anterior half or arranged in two parallel rows. Lateral margins of supracheliceral lamina crenulate. Dorsal scute in male trapezoidal with posterior margin convex, in female markedly pyriform. Pedipalpal tibia sinuous at base. Femoral pseudoarticular formula: 2/4-6/2-3/2-4. Winglets of penis uniformly narrow (longer than wide) along its length, borders undulated; anterior part in ventral view folding ventrally to form collar. Shaft strongly sinuous dorsoventrally, slightly bent without forming definite angle at glans. Glans globose, surface with simple pores and two or three pairs of asymmetric apical setae, stylus 40–70% of glans length. Species *Holcobunus* are frequently misidentified as species of *Jussara* and *Abaetetuba*. This was largely discussed by Tourinho (2004), and a table and illustrations comparing characters in each genus distributed in the Atlantic Forest were provided in an attempt to avoid future misidentification (Tourinho, 2004: table 1).

Distribution. South America: Brazil, Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo.

Included species. *H. bicornutus* (Mello-Leitão, 1940), *H. nigripalpis* Roewer, 1910, *H. dissimilis* sp. nov., *H. ibitirama* sp. nov., *H. uaisoh* sp. nov.

Remark: Males of the four species of *Holcobunus* have very similar external morphology, although they can be separated by examining their color pattern. There are three yellow species included in *Holcobunus*. However only *H. ibitirama* sp. nov. is completely yellow without stains or stripes of other colors, while *H. nigripalpis* have anterior border of carapace with black spots. The median posterior region of the dorsal scute and anterior border of the coxae are covered by a faint black spot. Anterior median portion of scute and middle of second prosomatic tergite (metapeltidium) and carapace behind eye mound with longitudinal short stripe of same color. *Holcobunus dissimilis* sp. nov. has a larger and longer black stripe extending from the anterior to the posterior dorsal scute. Females of *H. nigripalpis* have one lateral spot on each side of the posterior dorsal scute, while the female of *H. dissimilis* sp. nov. having a brown dorsal background with a white arch surrounding the anterior prosoma and several white spots and stripes distributed on the dorsal scute.

Key for the species of *Holcobunus*

1. Eye mound armed with two anterior blunt, single-blunt pointed spines (Se Tourinho & Kury, 2001), femur of leg I shorter than body, femur of leg II with six pseudoarticular nodules, femur of leg IV with three pseudoarticular nodules..... *H. bicornutus*
- Eye mound with two rows of more than three short granules (Fig. 3C), femur of leg I longer than the body, femur of leg II with four, five or six pseudoarticular nodules..... 2
2. Body color black eye mound black or mound with a pair of yellowish stripes, females with light dorsal stripes and spots (Fig. 5), eye, femur of leg II with five or six pseudoarticular nodules, femur of leg IV with two or three pseudoarticular nodules
- *H. uaisoh*
- Body uniformly yellow (Fig. 3) or background yellow or brown with white or dark stripes or stains (Fig. 1), eye mound with 8–9 short granules, femur of leg II with four or five pseudoarticular nodules, femur of leg IV with two, three or four pseudoarticular nodules
3. Body color uniformly yellow without stripes or stains, femur of leg II with four pseudoarticular nodules, femur of leg IV with three or four pseudoarticular nodules
- *H. ibitirama*
- Body color yellow with dark stripes or stains on carapace and/or dorsal scute or background brown with a white arch and several white spots and stripes distributed on scute (Fig. 1), femur of leg II with four or five pseudoarticular nodules, femur of leg IV with two, three or four pseudoarticular nodules
4. Body color yellow (when recently collected it tends to be orange), with median posterior region of dorsal scute and anterior border of coxae covered by a faint black spot in males, females with a lateral rounded spot in the dorsal scute, dorsal black faint spot lacking (See Tourinho & Kury, 2001), femur of leg II with five pseudoarticular nodules, femur of leg IV with two or three pseudoarticular nodules
- *H. nigripalpis*
- Body color yellow, with abdomen with large dark median stripe along its full extent, or background brown with a white arch surrounding anterior prosoma and several white spots and stripes distributed on scute, eye mound darkish brown (Fig. 1), femur of leg II with four or five pseudoarticular nodules, femur of leg IV with two, three or four pseudoarticular nodules femoral
- *H. dissimilis*

Holcobunus dissimilis sp. nov.

Figs. 1, 2, 7

Etymology. From Latin *dissimilis* (dis- + similis = different, unlike or dissimilar) is given in reference to the highly different color pattern between males and females of this species.

Type locality. Brasil, Espírito Santo, Santa Teresa, Estação Biológica Santa Lúcia (19°58'36"S–40°32'06"W, 867 m).

Type material. Brasil, Espírito Santo, Santa Teresa, Estação Biológica Santa Lúcia, D. Mota leg., 25.VIII.2006; male holotype (MZSP-29514); idem, 1 male paratype (MZSP-29516), REBIO Augusto Ruschi, R. Pinto-da-Rocha, C. Bragagnolo & M.B daSilva leg., 11.IV.2009; 1 male paratype (MZSP 57151); idem, 2 males, 6 females paratypes (MNRJ-17968), T.G. Souza leg., 26.VIII.2006; 2 males, 4 females paratypes (MNRJ-18627), C.O. Azevedo *et al.* leg, 10.VI.2001.

Distribution. Known only from mountains of Espírito Santo State in the municipality of Santana Tereza (Fig. 7).

Diagnosis. Male: specimens preserved in ethanol have yellow body, eye mound black, abdomen with large dark median stripe along its full extent (Fig. 1A, C), legs black, coxae I–II dorsally with pale yellow spots. Femur, patella and proximal half of pedipalpal tibia black, proximal half of tibia and tarsus cream, chelicerae black (Fig. 1A–C). Eye mound armed with sharp granules (Fig. 1C). Femoral nodule formula: 2/4-5/2-3/3-4. Dorsal orifice of anterior shaft of penis lacking (Fig. 2A, see also Tourinho & Kury, 2001, Fig. 37), glans with three pairs of subapical setae (Fig. 2C, E).

Description. Lengths: body: 2.75 mm, carapace: 0.85 mm, chelicera: 0.6 mm, pedipalps: 2.82 mm. Femora: 10.5/18.7/10.2/14.4 mm. Dorsal surface: body surface reticulate. Suprachelicerite lamina armed distally with one triangular and crenulated tubercle on each lobe. Eye mound armed with two rows of 10 or more sharp granules. Ventral surface reticulate. Lateral margins of genital operculum unarmed, arcuuli genitales II unarmed. Chelicerae: ventrobasal spine of basichelicerite blunt. Pedipalps: femur armed with ventral row of sharp pointed tubercles. Patella, including inner apophysis, armed with dorsolateral sharp-pointed tubercles, inner apical apophysis longer than wide. Tibia armed with sharp tubercles. Tarsus unarmed. Legs: femoral pseudoarticular formula: 2/5/2/2-3. Penis (Fig. 2): morphology very similar to *H. nigripalpis*. Winglets longer than wide, narrower than shaft, rift depressions (see Tourinho & Kury, 2001, Fig. 35–36) of shaft present (Fig. 2A–B), ventral collar of winglet present but not marked (Fig. 2B and D), shaft almost straight. Dorsal and ventral faces of glans not depressed, with three pairs of subapical setae (Fig. 2C–F). Stylus straight not bent in ventral or lateral view (Fig. 2C).

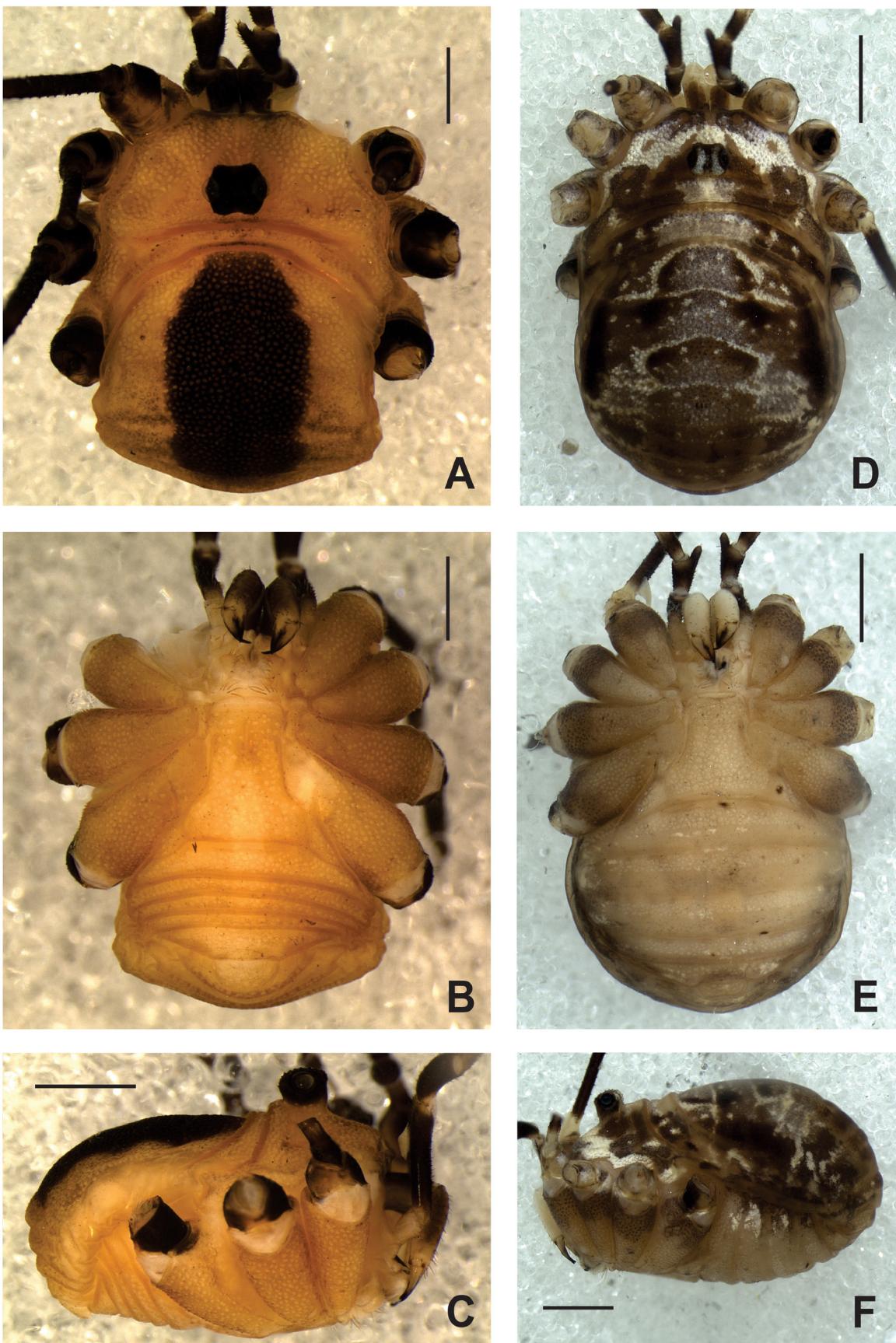


FIGURE 1. *Holcobunus dissimilis* sp. nov. Male holotype: A, dorsal view; B, ventral view; C, lateral view. Female paratype: D, dorsal view; E, ventral view; F lateral view. Scale bars = 0.5 mm.

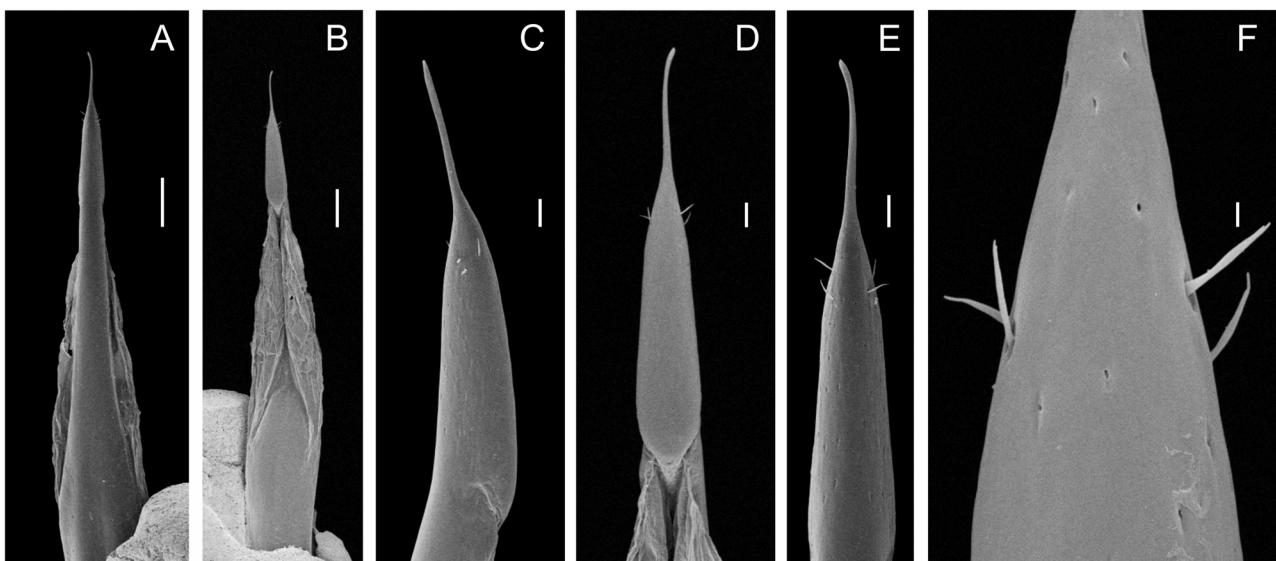


FIGURE 2. *Holcobunus dissimilis* sp. nov. Male genitalia: A, dorsal view (scale bar=100µm); B, ventral view (scale bar=100µm); C, lateral view (scale bar=20µm); D, glans, dorsal view (scale bar=20µm); E, detail of glans (scale bar=20µm); F, detail of apex (scale bar =3µm).

Female paratype (Fig.1D–E): length: Body: 4.1 mm, carapace: 0.85 mm, abdominal dorsal scute: 2.9 mm, chelicera: 0.6 mm, pedipalps: 3.0 mm. Color: dorsal background brown with a white arch surrounding anterior prosoma and several white spots and stripes distributed on scute, eye mound darkish brown with a white stripe surrounding the contour of the eye (Fig.1D,F). Trochanter I–IV cream with darkish lateral spots, coxae with darkish brown spots (Fig.1D). Legs: femoral nodule formula: 2/4-5/3/3-4, femur, patella and proximal half of pedipalpal tibia black, proximal half of tibia and tarsus cream, chelicera cream with a dorsal darkish spot on fixed finger. Ventral surface cream (Fig.1F,E). Dorsal and ventral surfaces: as in the male, except the body swollen dorsoventrally and by having an articular membrane isolating all sclerites. Membrane much evident, widely surpassing sclerites.

Remarks. This species has external and genital morphology very similar to *H. nigripalpis*, but is distinguished by the large black stain present on male dorsal scute and the lack of dorsal orifice on anterior portion of penis shaft present in *H. nigripalpis* (Tourinho & Kury, 2001. Fig. 37)

Holcobunus ibitirama sp. nov.

Fig. 3, 4, 7

Etymology. After type locality, Ibitirama, a word of the indigenous Tupi people of Brazil that means "region with many mountains."

Type locality. Brazil, Espírito Santo, Ibitirama, Santa Marta.

Type Material: Brazil, Espírito Santo, Ibitirama, Santa Marta, (20°29'52"S–41°43'47"W) M.B.da Silva & G.E. Kaneto leg., III.2006, MZSP 57264, male holotype and two male paratypes; 3 immatures.

Distribution. only known from type locality (Fig. 7).

Diagnosis. Body color orange, legs trochanter and eye mound black (Fig. 3A–C). Femur, patella and proximal half of pedipalpal tibia brownish, distal half of tibia and tarsus cream (Fig. 3A,C), chelicerae cream. Eye mound armed with sharp granules (Fig. 3C). Femoral nodule formula: 2/4-2-3/3-4.

Description. Male paratype: lengths: body: 2.55 mm, carapace: 0.71 mm, chelicera: 0.80 mm, pedipalps: 2.75 mm. Femora: 9.6/15.4/8.5/11.9 mm. Dorsal and ventral body surface reticulate. Supracheliceral lamina armed distally with one triangular and crenulated tubercle on each lobe. Eye mound armed with two rows of 10 or more sharp granules. Lateral margins of genital operculum armed with three-pointed, sharp granules, arcui genitales II unarmed. Chelicerae: ventrobasal spine of basichelicerite blunt. Pedipalps: femur armed with ventral row of sharp

pointed tubercles. Patella, including inner apophysis, armed with dorsolateral sharp-pointed tubercles, inner apical apophysis as long as wide. Tibia armed with sharp tubercles. Tarsus unarmed. Legs: femoral nodule formula: 2/4/2-3/3-4. Penis (Fig. 4): Winglets not projected laterally, longer than wide, shorter than in other species of *Holcobunus* (Fig. 4 A, B). Dorsal surface of glans not depressed (Fig. 4C, D). Stylus bent in ventral view, with two pairs of lateroapical setae (Fig. 4D).

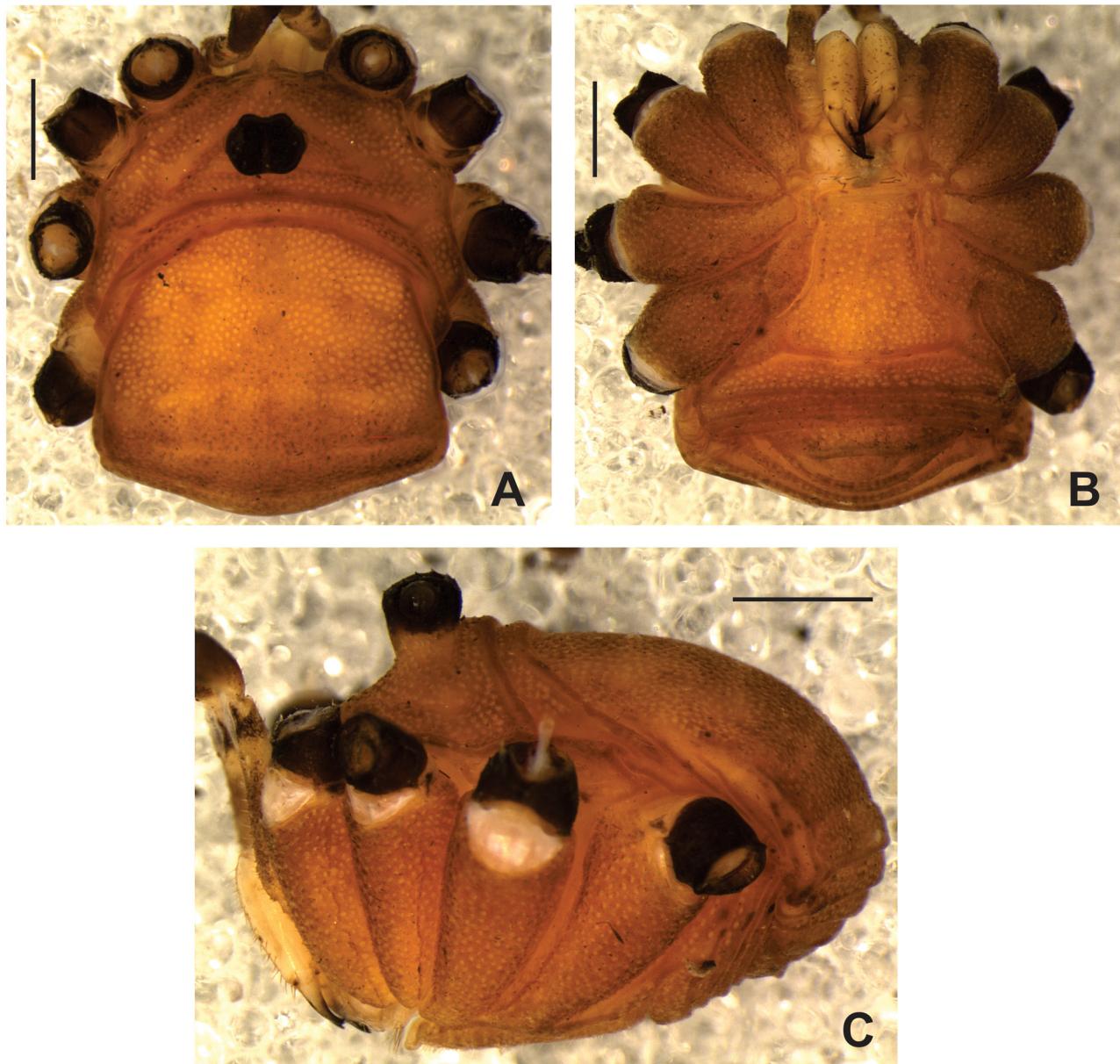


FIGURE 3. *Holcobunus ibitirama* sp. nov. Male holotype: A, dorsal view; B, ventral view; C, lateral view. Scale bars = 0.5 mm.

Holcobunus uaisoh sp.nov

Fig. 5–7

Etymology. “uai sô” is a popular expression from people of Minas Gerais State of Brazil, that has English origin, meaning and pronunciation of “Why so?”

Type locality. Brasil, Minas Gerais, Fervedouro, Parque Estadual Serra do Brigadeiro.

Type Material. Male holotype, 4 females paratypes, 3 immatures (MZSP 69117), M.B. daSilva & G.E. Kaneto leg., III.2006.

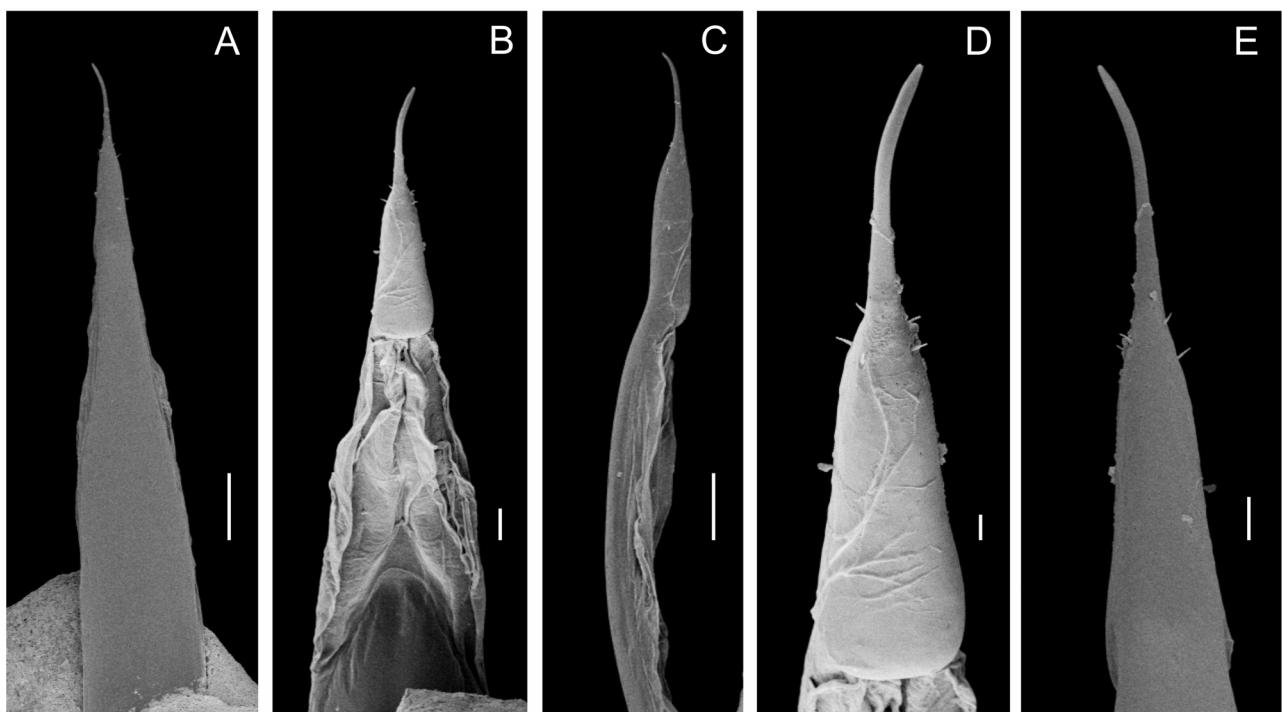


FIGURE 4. *Holcobunus ibitirama* sp. nov. Male genitalia: A, dorsal view (scale bar=100µm); B, ventral view (scale bar=20µm); C, lateral view (scale bar=100µm); D, detail of glans, ventral view (scale bar=10µm); E, detail of glans, dorsal view (scale bar=20µm).

Distribution. Only known from the type locality (Fig. 7).

Diagnosis. Males with body color black (Fig. 5A–C), females with light dorsal stripes and spots, eye mound with a pair of yellowish stripes (Fig. 5D–F). Femur, patella and proximal half of pedipalpal tibia black, distal half of tibia and tarsus cream, chelicerae cream (Fig. 5C and F). Eye mound armed with sharp granules. Femoral nodule formula: 2/5-6/2-3/2-3. Penis: Dorsal orifice of anterior shaft of penis lacking (Fig. 6A and C).

Description. Male paratype: lengths: body: 2.65 mm, carapace: 0.81 mm, chelicera: 1.22 mm, pedipalps: 2.95 mm. Femora: 10.1/19.2/9.5/14.2 mm. Dorsal and ventral surface body surface reticulate. Supracheliceral lamina armed distally with one or two blunt tubercles on each lobe. Eye mound armed with two rows of 10 or more sharp granules (Fig. 5C). Lateral margins of genital operculum armed with three-pointed sharp granules, arcui genitales II unarmed. Chelicerae: ventrobasal spine of basichelicrite blunt. Pedipalps: Femur armed with a ventral row of sharp pointed tubercles. Patella, including inner apophysis, armed with dorsolateral sharp pointed tubercles, inner apical apophysis longer than wide. Tibia armed with sharp tubercles. Tarsus unarmed. Legs: Femoral nodule formula: 2/5-6/2-3/2-3. Penis (Fig. 6) similar to *H. nigripalpis* and *H. dissimilis*. Winglets longer than wide, narrower than shaft (Fig. 6A–B), ventral collar present but not very marked (Fig. 6B and D), shaft almost straight. Dorsal and ventral faces of glans not depressed, with two pairs of subapical setae (Fig. 6C–F). Stylus bent in ventral view (Fig. 6D).

Female paratype: lengths: body: 4.12 mm, carapace: 1.15 mm, chelicera: 1.4 mm, pedipalps: 2.9 mm. As in the male, except body swollen dorsoventrally and articular membrane isolating all sclerites (Fig. 5D–F). Membrane very evident, widely surpassing sclerites (Fig. 5E).

Holcobunus bicornutus (Mello-Leitão, 1940)

Paratamboicus bicornutus Mello-Leitão, 1940: 97; Ringuelet, 1954: 297; Roewer, 1953:256; Crawford, 1992: 37; Tourinho & Kury, 2001: 9, figs. 1–13.

Diagnosis. *Holcobunus bicornutus* is known only by the juvenile holotype, although it can be separated from the

other species of *Holcobunus* by the eye mound armed with two anterior blunt spines, longer than in other species (see Tourinho & Kury, 2001, Figs 9 and 11), and by the anterior leg I much shorter than body when compared to other species (see Tourinho & Kury, 2001, Fig.11).

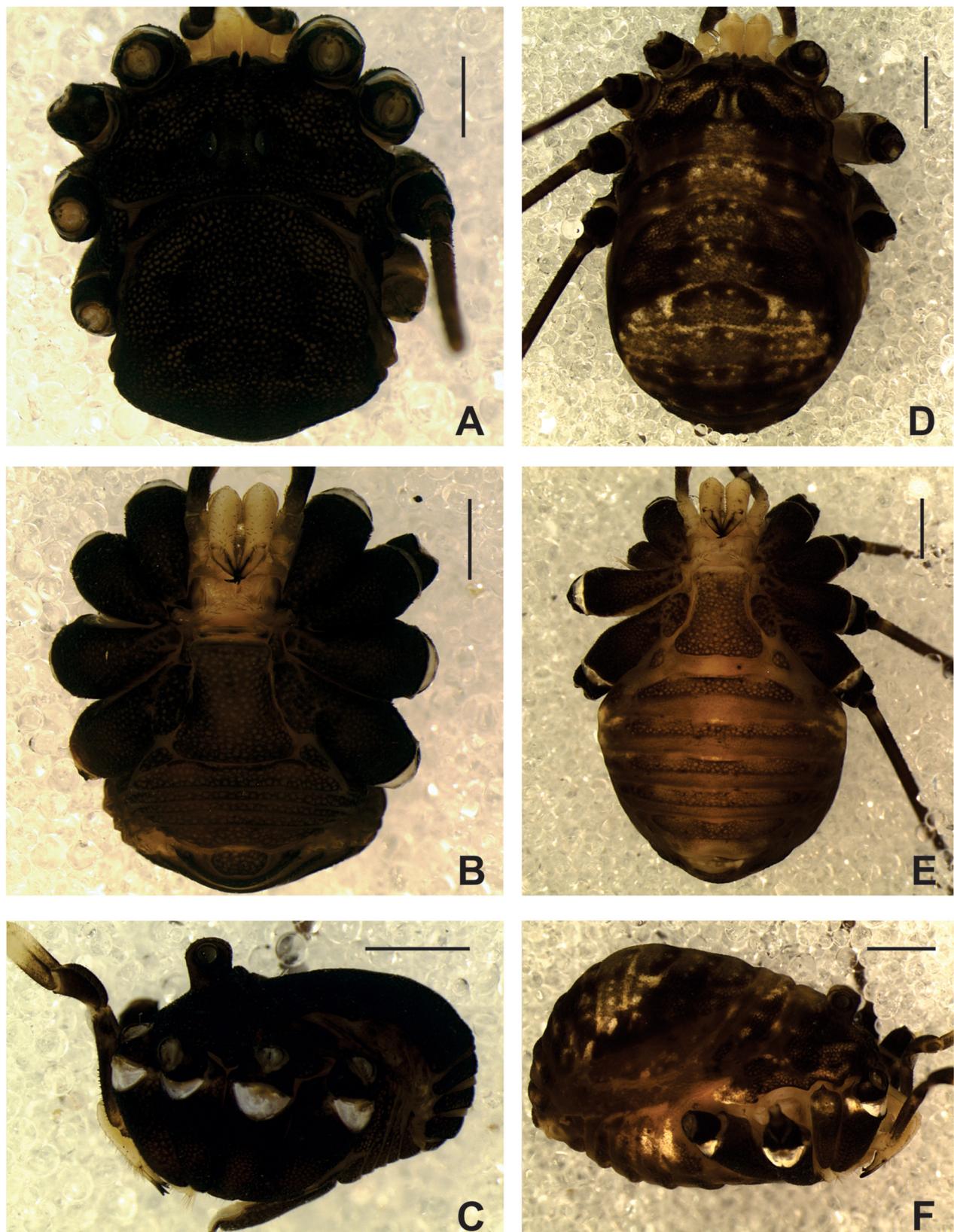


FIGURE 5. *Holcobunus uaisoh* sp. nov. Male holotype: A, dorsal view; B, ventral view; C, lateral view. Female paratype: D, dorsal view; E, ventral view; F, lateral view; Scale bars = 0.5 mm.

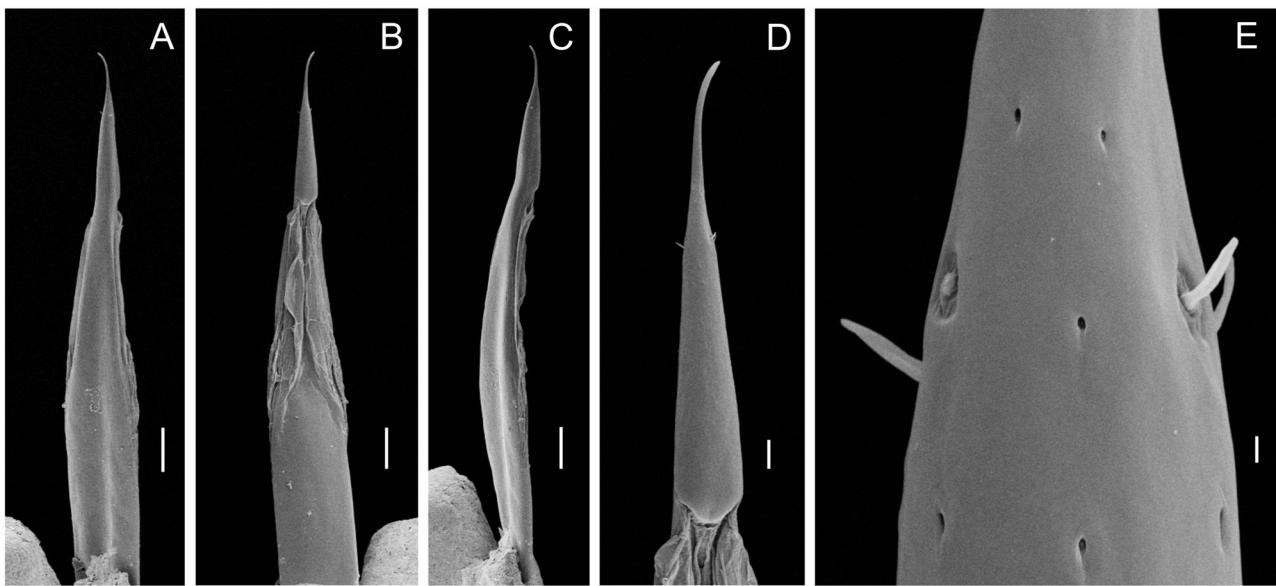


FIGURE 6. *Holcobunus uaisoh* sp. nov. Male genitalia: A, dorsal view (scale bar=100µm); B, ventral view (scale bar=100µm); C, lateral view (scale bar=100µm); D, detail of glans (scale bar=20µm); E, detail of apex (scale bar=2µm).

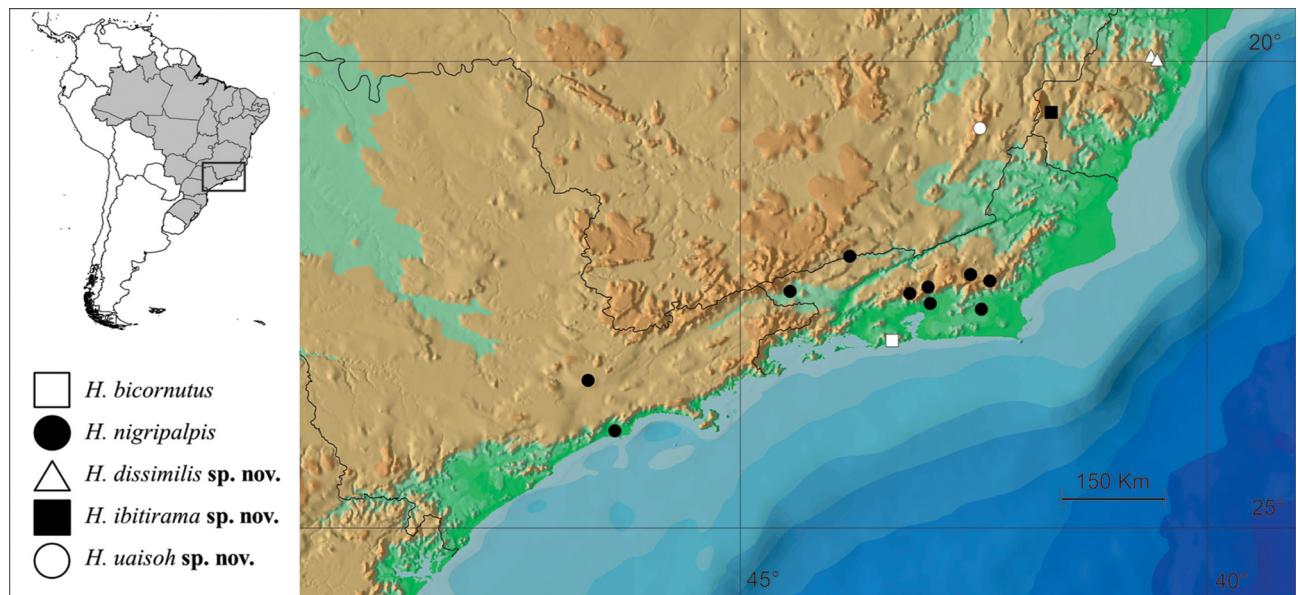


FIGURE 7. Distribution records of *Holcobunus* species.

Holcobunus nigripalpis Roewer, 1910

Holcobunus nigripalpis Roewer, 1910: 163; 1923:1070, figs.1170–1171; Mello-Leitão, 1932: 23; Roewer, 1953: 245; Tourinho & Kury, 2001: 9, figs. 14–38; Bragagnolo & Pinto-da-Rocha, 2009: 530; Resende *et al.* 2012a: 100–102; 2012b: 150, 151, 154.

Tamboicus silvicola Mello-Leitão, 1932b:71, 1938: 337; Ringuelet, 1954: 254.

Sympathica silvicola: Mello-Leitão, 1938: 337; Ringuelet, 1953: 40.

Sympathica bisignata Mello-Leitão, 1933:101; Roewer, 1953: 255; Ringuelet, 1954: 301.

Type locality. Brazil, São Paulo, Santos.

Diagnosis. Living specimens are darkish yellow, museum specimens are pale yellow. Males of *H. nigripalpis* can be separated from other species of *Holcobunus* by having the body yellow without a marked strong stripe; in

contrast to *H. dissimilis* males, it does not have a dark well-marked median stripe; it has a faint black spot covering the anterior median portion of dorsal scute instead. Dorsal orifice of anterior shaft of penis present. Females are yellow but with rounded black spot on posterolateral border.

Material examined (New Record). Brazil. 1 male MNRJ 4967, 1 female MNRJ 4968, Minas Gerais, Rio Preto, Santa Bárbara, Fazenda do Luluca, 29/03/2002, leg. Amazonas Chagas, Alessandro Giupponi.

Distribution. Brazil. Minas Gerais state. Rio Preto. Rio de Janeiro state. Guapimirim, Lumiar, Nova Friburgo, Petrópolis: Itaipava, Rezende: Serrinha do Alambari, Silva Jardim: Aldeia Velha, Teresópolis. São Paulo state. Santos. (Fig. 7).

Discussion

Holcobunus, together with *Geaya* and *Prionostemma*, were once thought to be widespread in the Neotropics, a distribution that is now regarded as unusual for Opiliones. Species of Neotropical Eupnoi are now generally known to show high endemism and very restricted distributions (Pinto-da-Rocha et al., 2005, Tourinho, 2004a, DaSilva et al in press), and groups of species that are geographically closer are more likely to be related than those that are distributed in different biogeographic regions (Hedin et al., 2012). Revisionary studies of species in the Brazilian Atlantic forest (*Holcobunus* included) have shown that taxonomic groups of species traditionally supposed to be widespread in the Atlantic Forest and southern South America (more specifically, Uruguay, Paraguay Argentina, Bolivia and Chile, including the region of the Andes) are, in fact, restricted to specific geographic regions (Tourinho, 2004a,b, Tourinho & Kury, 2001, 2003) in patterns shared with species from the suborder Laniatores (Kury, 2003).

The two nominal species included in *Holcobunus* are recorded in the states of São Paulo and Rio de Janeiro. *Holcobunus nigripalpis*, is the only species of the genus that is well studied and well represented in scientific collections. The second species, *H. bicornutus*, is known only from its juvenile holotype (Tourinho & Kury, 2001). *Holcobunus nigripalpis* was recorded basically along the Serra dos Órgãos in the Atlantic Forest. The three new species described in this paper are found in the states of Minas Gerais and Espírito Santo. New records of *H. nigripalpis* are also found in the Mantiqueira Mountains, state of Minas Gerais, relatively close to Rio de Janeiro border, between the municipalities of Santa Bárbara do Monte Verde and Rio Preto.

Only about 7% of the original Atlantic forest remains in Brazil. The Mantiqueira Mountains, located among the states of Minas Gerais, Rio de Janeiro and São Paulo preserves at least part of the original fauna and flora of this important forest. The distributions of the new species herein described, Minas Gerais and Espírito Santo, suggest that *Holcobunus* may not be spread along the southeastern coastline of Brazil, as in *Jussara* and *Munequita* (Tourinho & Kury, 2003), but are probably distributed toward central Brazil, especially the Serra dos Órgãos and Serra da Mantiqueira. The knowledge of arachnids in the central and northern Brazil is very poor, with only four species of Gagrellinae described and recorded for Minas Gerais (*H. nigripalpis* included), and none for the states or localities outside the southeastern coastline (Roewer, 1953). A more specific scenario for the distribution of *Holcobunus* in Brazil will be possible with results of future expeditions and studies in the states of Minas Gerais, Goiás, Tocantins, Mato Grosso do Sul and southeastern Espírito Santo.

The low diversity of *Holcobunus* contrasts with other southeastern genera of Gagrellinae in Brazil, such as *Jussara* (15 spp.) and *Munequita* (11 spp.), which range from northeastern to southern Brazil (Paraná state), and southeastern (Espírito Santo and Minas States) to southern Brazil (Paraná state). However, this is certainly an artifact, much as it once was for *Jussara* (Tourinho & Kury, 2003). As unexplored localities are sampled, new species of this genus will likely be found, and the true dimension of the diversity in *Holcobunus* will be finally accessed.

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