

Lurio cf. *solennis* (C. L. Koch 1846) from Costa Rica and Nicaragua (Araneae: Salticidae: Dendryphantinae)

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Presently, four species are placed in the neotropical dendryphantine genus *Lurio* Simon 1901: *L. conspicuus* Mello-Leitão 1930, *L. crassichelis* Berland 1913, *L. lethierryi* (Taczanowski 1872) and *L. solennis* (C. L. Koch 1846). Of these, the only species that is well-documented is *L. solennis* (Metzner 2015, Prószyński 2015, WSC 2015). For reference, earlier descriptions of this spider are given in Appendix 1.

Recently spiders of the genus *Lurio* were photographed for the first time in Costa Rica and Nicaragua (Figures 1-3). These photographs are of value since there appears to be no other photographic documentation of the appearance of these spiders in life. I have identified these as *Lurio* cf. *solennis*. Based on agreement with published descriptions (Appendix 1), they may be examples of *L. solennis*, but in the absence of specimens it is not possible at this time to confirm this with certainty. The pattern of scales on the dorsum of the male and the females pictured here agrees closely with the respective figures published by Crane (1945). These photographs extend the known distribution of *Lurio*, and quite possibly *L. solennis*, to Central America.

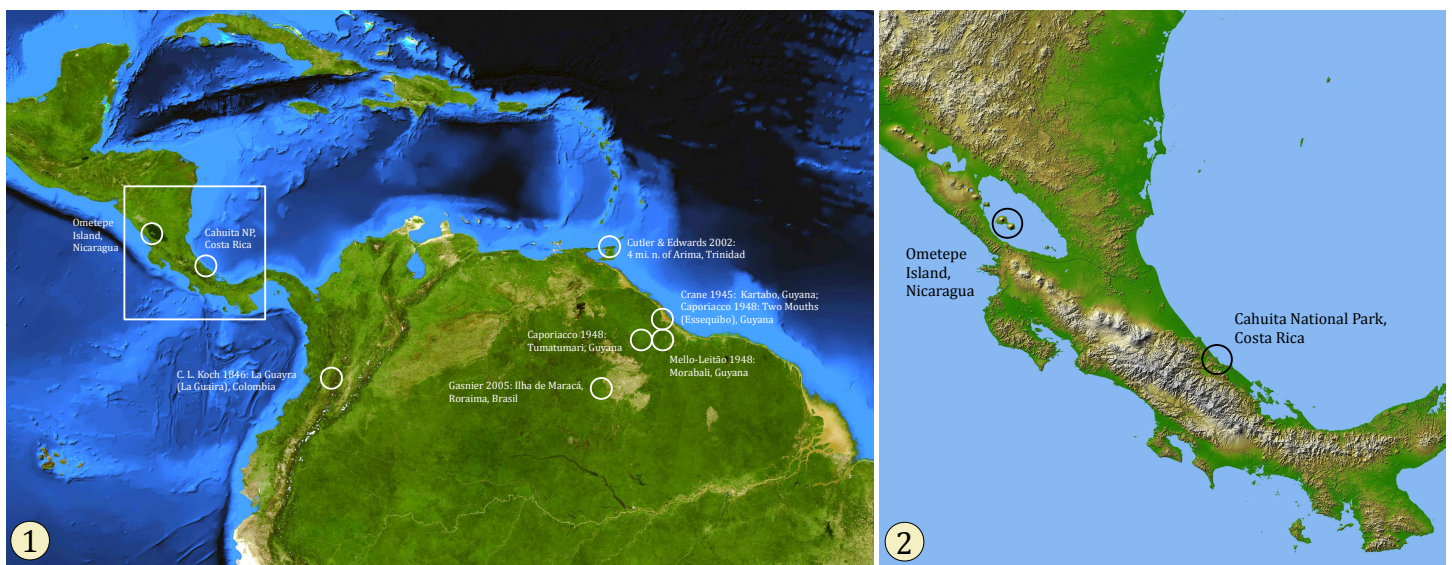


Figure 1. Neotropical localities that may be associated with *Lurio solennis*. **1.** Central American localities of the spiders shown in Figures 2 and 3 are identified in the inset rectangle, and in an enlargement of that rectangle (**2**). Other published localities, including that of *Phidippus hingstoni* Mello-Leitão 1948 (see Appendix 1) are identified. According to Crane (1945), *L. solennis* is found from Colombia to Brazil. Background images courtesy of NASA (**1**) and NASA/JPL/NIMA (**2**). The Gasnier (2005) record corresponds to a female specimen photographed and identified as *Lurio* cf. *solennis* (Prószyński 2015).



Figure 2. Photographs of a female *Lurio cf. solennis* resting on top of a leaf at Cahuita National Park, Costa Rica (midday 2 JUN 2015, P. Donaldson). Used by permission.



Figure 3. Photographs of a female (1-2) and a male (3-5) *Lurio cf. solennis* on a bush in a wild area behind Ojo de Agua, a large natural spring pool on Ometepe Volcanic Island in Lake Nicaragua, Nicaragua (16 JUN 2015, P. Donaldson). Used by permission.

The relatively long legs of these spiders are held in a distinctive position, flexed in what appears to be a defensive stance; locally these have been called 'scorpion spiders' or 'arañas escorpiones' as a result of their resemblance to scorpions (Donaldson, pers. comm.).

With respect to general coloration including the presence of iridescent scales, *Lurio cf. solennis* resemble *Paraphidippus aurantius* (Lucas 1833), a relatively well-known woodland dendryphantine that has been found from the southeastern United States south to Panama (Figure 4). A close comparison of the two species, however, reveals many distinct differences. The legs and abdomen of *Lurio cf. solennis* are much more elongated relative to the size of the carapace, and both males and females have a dark, glabrous carapace marked by a thin white marginal band, and a thin white band encircling the eye region to the rear.



Figure 4. Male (1-4) and two female (5, 7 and 6, 8) *Paraphidippus aurantius* from the woodland understory of southern Greenville County, South Carolina. Males, like *Lurio*, have large chelicerae. Females are much more compact than *Lurio*, with broad marginal bands covering the sides of the carapace. The iridescent scale cover of females (when not worn) varies from iridescent green to bronze; pigmented scales vary from white to tan or bright orange. Each scale bar = 1 mm. These photographs by D. E. Hill are released under a [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/) (Creative Commons Attribution 4.0 International) license for any use.

Acknowledgments

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Appendix 1: Published descriptions of *Lurio solennis*

The description of *Phidippus hingstoni* by Mello-Leitão (1948) is included here since Metzner (2015) noted that this species name, per (C. L.) Scioscia, may be a synonym of *L. solennis*. Edwards (2004) previously reported that *P. hingstoni* is not a *Phidippus*, and its description agrees generally with descriptions of *L. solennis*.

1. Koch 1846 (text pp. 163-164, Fig. 1217 on Tab. CCCCLIX)

Hyllus solennis.

Tab. CCCCLIX. Fig. 1217.

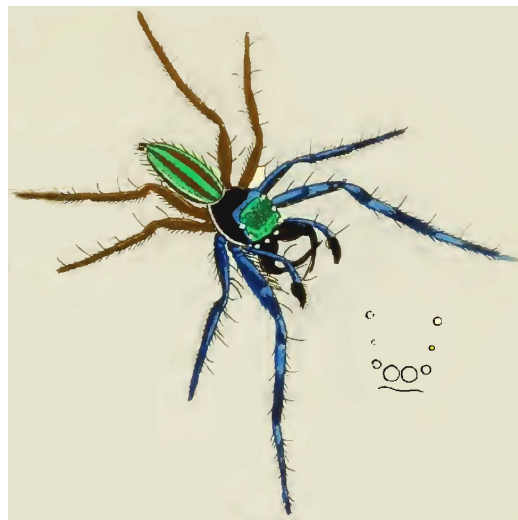


Fig. 1217 - *H. solennis*

Kopf und Thorax braunschwarz, die Kopfplatte goldgrün, ein Querstreif am Hinterkopfe und ein solcher an den Seitenaugen bläulichweiss; Hinterleib goldgrün, zwei Längsstreifen rostbraun, eine Seitenlinie weiss. Beine rostbraun, bläulichweiss beschuppt.

Länge $2\frac{3}{4}$ '''.

Klug Königl. Samml. in Berlin.

Ungemein schön. Der Vorderleib von regelmässiger Form, im Genick der Quer nach eingedrückt. Der Hinterleib schmal, fast kegelförmig, länger als der Vorderleib. Die zwei Vorderbeine unverhältnissmässig länger und dicker als die übrigen.

Kopf, Thorax, Fresszangen, Taster und Brust gleichfarbig schwarzbraun, fast schwarz, auf der Kopfplatte starke Spuren von goldgrüner Schuppenbedeckung, hinter dem Genicke ein Querstreif und an den Seitenaugen ein Längsstreif weisslich himmelblau, etwas metallisch glänzend; die vordere Hälfte der Fangkralle der Fresszangen rostbraun, die Endhälfte roth; auf dem zweiten, dritten und vierten Gliede der Taster goldgrüne oder himmelblaue Haarschuppen. Der Hinterleib oben goldgrün, schön glänzend, zwei breite Längsstreifen rostbraun, stark metallisch glänzend, an den Seiten eine feine Linie weiss; der Bauch schwarz. Die Beine, gleich dem Vorderleibe, schwarzbraun, die zwei Hinterpaare heller, ihre Schenkel rostgelb, an den Schenkeln und vorn an den Schienbeinen des Vorderpaars ein Ringfleck weisslich himmelblau, die Hüften oben, eben so die Schenkel und Kniee aller Beine auf dem Rücken ebenfalls weisslich himmelblau ungleich beschuppt; auch an der Wurzel der Fersen des Vorderpaars ein himmelblauer Ring; die himmelblauen Schuppen durchgehends mit schönem silberartigem Glanze. Ein

Männchen.

Vaterland: Columbien, La Guayra.

Anmerkung. Die Schuppenflecken des Kopfes deuten im nicht abgeriebenen Zustande auf eine goldgrüne Kopfplatte.

2. Simon 1901 (text p. 619, figs. p. 614)

Le genre *Lurio*, voisin du précédent, est cependant exceptionnel par son groupe oculaire parallèle.

Le céphalothorax y est court et arrondi de chaque côté; sa partie céphalique, plane eu avant, est convexe de chaque côté en arrière, près des yeux et un peu concave dans le milieu; la thoracique, à peine de 1/5 plus longue et fortement déclive, est marquée en avant d'une profonde dépression et d'une courte strie située un peu en arrière des yeux. Ses yeux antérieurs sont plus gros, plus inégaux et plus resserrés que ceux des *Dendryphantes*, et en ligne à peine récurvée; son groupe oculaire parallèle est beaucoup plus étroit en arrière que le céphalothorax; ses yeux postérieurs sont gros et saillants; ses yeux de la 2e ligne sont situés avant le milieu (beaucoup moins que chez les *Dendryphantes*) et suivis, de chaque côté, d'une assez profonde dépression.

Le sternum est un peu plus large dans le milieu, mais très atténué en avant.

Les chélicères du mâle (fig. 733 C) ressemblent à celles de certains *Dendryphantes* (*D. nitidus* Peckh.), elles sont épaisses à la base, mais très atténuées, divergentes et proclives; leur marge inférieure est armée, vers le tiers apical, d'une très forte et longue dent arquée, tronquée et souvent déprimée; la supérieure, d'une dent plus petite et conique, très reculée, suivie d'une très petite dent presque basale et elle offre, le plus souvent, près la base du crochet, 1 ou 2 petites dents coniques; leur crochet est très long, sinueux et presque toujours pourvu en dessous, vers le tiers basal, d'un denticule conique; ses lames sont longues, divergentes, mais arrondies, ni anguleuses, ni mucronées.

Les pattes antérieures, plus robustes que les autres, ont l'armature de celles des *Dendryphantes*, mais leur métatarse est plus long et armé de 2 paires d'épines.

La patte-mâchoire (fig. 734 D) est plus grêle et plus longue; son fémur est courbe; son tibia cylindrique, presque aussi long que la patella et armé d'une apophyse supéro-externe simple, souvent obtuse; son tarse ovale assez étroit et peu atténué, recouvre un bulbe simple et discoïde non débordant, arrondi dans le bas, mais pourvu, dans le haut, d'un stylus court et robuste, naissant de son angle externe.

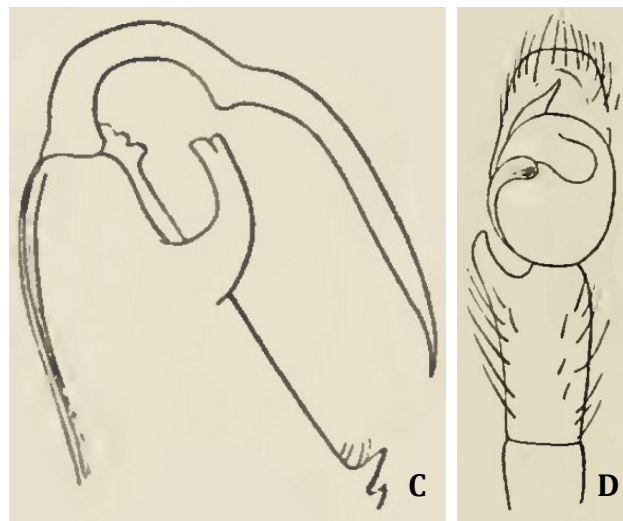


Fig. 731 à 745. [733 à 734]

C. *Lurio solennis* C. Koch. Chélicère ♂ en dessous. —
D. *Id.* P. M. ♂.

3. Simon 1901 (text p. 626)

Lurio solennis C. K., rapporté par G. Koch à son genre *Hyllus*, à cause de ses longues ehélicères, est revêtu de squamules d'un vert métallique, avec le céphalothorax orné d'un large demi-cercle, l'abdomen, d'une bordure chez le mâle, de taches sèriées chez la femelle, très blanches; ses pattes sont jaunes, sauf celles de la 1^{re} paire, qui sont noires, mais ornées de poils blancs; il est commun au Venezuela, en Colombie, en Guyane (*A. Wagae* Tacz.), je l'ai reçu aussi du Brésil; j'en ai d'autres espèces inédites des mêmes régions.

4. Simon 1901 (text p. 631)

Lurio. nov. gen. — *Hyllus* C. Koch, *Arachn.*, XIII, 1846 (ad part. *H. solennis*).

A Dendryphante differt quadrangulo parallelo (baud latiore postice quam antice), multo latiore quam longiore et postice cephalothorace multo angustiore, oculis anticis inter se confertioribus, apicibus in lineam vix recurvam, oculis ser. 3^{ae} majoribus, pedibus anticis (praesertim maris) longioribus, reliquis pedibus robustioribus sed tibiis cylindraceis, tnetatarsis gracilibus tibiis non multo brevioribus, pedibus 2ⁱ paris tibia subtus aculeo parvo submedio aculeisque apicalibus similibus binis, tibiis quatuor posticis aculeis apicalibus binis, metatarso 3ⁱ paris aculeis parvis apicalibus verticillatis, metatarso 4ⁱ paris aculeo minutissimo apicali inferiore, tantum instructis. — Chelae maris longae, valde divaricatae et insigniter dentatae.

TYPUS: *L. solennis* C. Koch.

AB. GEOGR.: America centr. et merid. tropica.

5. Crane 1945 (text p. 38, figs. p. 39)

Subfamily Dendryphantinae.

Lurio solennis (Koch, 1846).

Text-figs. 4 A-G.

References: *Hyllus solennis* Koch, 1846, p. 163, pl. cccclix, fig. 1217.

Lurio solennis, Simon, 1901, pp. 619, 626, 631, figs. 733, 734.

Color in Life: Female: Cephalothorax integument dark brown with narrow white marginal band, extending completely around clypeus. Ocular quadrangle covered with iridescent green scales; white scales behind anterior eyes, in a narrow line outside of small and posterior eyes, and in a narrow band across cephalothorax behind posterior eyes. Abdomen, integument wood brown with a broad median stripe and two pairs of vertical bands of lighter brown; 4 or 5 small antero dorsal white spots, a curving basal marginal stripe, and three pairs of large white lateral spots; iridescent green scales covering all lighter brown areas. First pair of legs dark reddish-brown, remaining legs lighter brown. A few whitish scales on all femora, on first three patellae and on 2nd and 3rd tibiae. Underparts of cephalothorax dark reddish-brown, abdomen wood brown with paler longitudinal markings. The abdominal dorsal markings show with various degrees of clarity, depending on the swelling of the abdomen.

Color in Alcohol: Male: Brownish-black. No trace of the iridescence described by Koch and Simon remaining on the cephalothorax and only faintly traceable on abdomen in two narrow dorsal stripes. A narrow marginal white band around cephalothorax, including the very narrow clypeus. Patches of white scales between small and posterior eyes, behind the latter and in a faint median patch between them. A white marginal band around abdomen distinct, as described by Koch and Simon. Blue scales described by Koch on legs white in preservative, present on femora of palp and all legs, and on patella, tibia and

metatarsus of first three pairs, being numerous only on first pair.

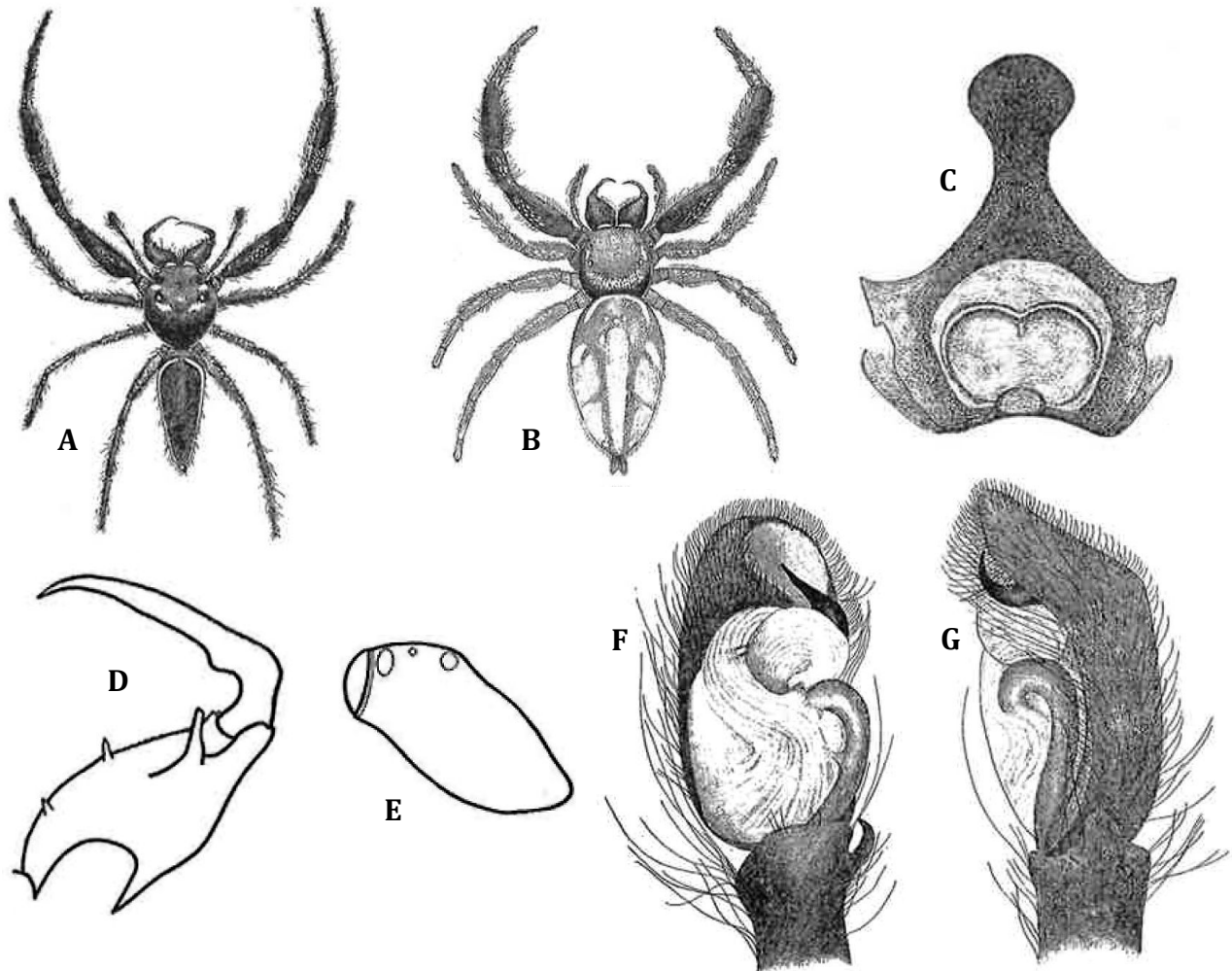
Female, somewhat faded, especially in regard to iridescence, but otherwise as in life.

Measurements: Largest male, 6.9 mm., largest female 9.7 mm. Remaining specimens not much smaller.

Remarks: In structure our specimens check with Simon's description and figures in every detail, save that in each of our four males the distal tooth on the superior margin of the chelicera is well separated from the smaller basal tooth, instead of being contiguous (cf., Text-fig. 4D, present paper, with Simon's Fig. 733). It is somewhat variable, however, in position. The large tooth of the inferior border is decidedly variable in amount of curvature.

Range: Known previously from Colombia to Brazil. The present series were all taken at Kartabo, Bartica District, British Guiana.

Material: A total of nine specimens was taken, as follows: 1917: Sept., 1 ♂ (Cat. No. 1712). 1920: 2 ♂ (No. 2034); 3 ♀ (No. 201482). 1924: Mar. 20, 1 ♀ (No. 24199); April, 1 ♀ (No. 241047); May 22, 1 ♂ (No. 241048).



TEXT-FIG. 4. **A**, *Lurio solennis*, dorsal view, ♂; **B**, same, ♀; **C**, same, epigynum; **D**, same, ♂, chelicera, ventral view; **E**, same, cephalothorax, lateral view; **F**, same, ♂, left palpus, ventral view; **G**, same, ectal view.

6. Caporiacco 1948 (text p. 724)

Tribe Dendryphantini

Genus LURIO E. S., 1901, Hist. Nat. Araign. 2, 231.

270. LURIO SOLENNIS (C.L.K.), 1846, *Die Arachn.* 13, 163, tab. 459, fig. 1217 (sub *Hyllus*).

One ♂ and one ♀ from Two Mouths (Essequibo), 9 July, and 1 ♀ from Tumatumari, 21 July.

The markings of these specimens are almost rubbed out; only the white stripe around the abdomen of the ♂ and the lateral white spots of the ♀ are well to be seen. No doubt exists upon the appurtenance to the species, as the palp and the chelicera fully agree with E. Simon's figure (*Hist. Nat. Araign.* 2, figs 733 and 734). The colour of the legs in the ♂ is dark brown, darker in the first pair, and with a reddish hue on the femora: this agrees fully with the description of Koch, while Simon describes the feet as yellow, except those of the first pair, which are black. The ♀, which is not described by Koch, has brown-reddish legs, with the apex and the basis of femora III and IV, the tibiae III and IV, the metatarsi II and IV, a large ring on metatarsus III, and the tarsi II, III and IV yellow. As the ♂ agrees fully in the colour of the legs with Koch's description, it is probable that Simon had before him a variety; the specimen in the collection that I deal with belongs surely to Koch's typical form.

Simon puts *Attus wagae*, described by Taczanowski (*Horae Soc. ent. Ross.* 1871, 8, 10, tab. iii, fig. 3), between the synonyms of *L. solennis*. If *A. wagae* is really a *Lurio* (and it is difficult for me to judge with any safety from the description), it is surely not the species of C. L. Koch, for the colour is quite different.

On the other hand, *Attus lethierryi* of Taczanowski belongs surely to that genus; the fang of the chela has a tooth (see *Horae Soc. ent. Ross.* 1871, 7, 11) which is a characteristic for *Lurio* or for *Ashtabula*, but the ocular area with parallel sides excludes the genus *Ashtabula*. Those two species live in French Guiana; *L. solennis* lives in Columbia and Venezuela.

7. Mello-Leitão 1948 (text pp. 190-191 fig. p. 191)

107 — *Phidippus hingstoni* sp. n. (Fig. 30)

Patás	Fémures	Patelas-tibias	Protarsos	Tarsos	Total
I	2,7	4,6	2,1	1,1	9,5 mm
II	2,0	2,4	1,4	0,8	6,6 mm
III	2,0	2,4	1,6	0,7	6,7 mm
IV	2,4	3,3	2,0	0,7	8,4 mm

Cefalotorax moderadamente elevado, de lados convexos, regularmente arredondados. Patas anteriores muito mais robustas que as outras, de fémur e tibia muito expressados, cilíndricos, as tibiae com uma fimbria de pêlos pouco densos, armadas de 2-2-2 espinhos ventrais, sem espinhos laterais, os protarsos com 2-2 espinhos ventrais e sem espinhos laterais. Patas posteriores pouco espinhosas; os protarsos III e IV apenas com um verticillo distal de pequenos espinhos. Margem inferior das quelíceras com um dente. Abdome pontudo atrás.

Fig. 30 - Epigino de *Phidippus hingstoni*

Cefalotorax fulvo-escuro, a região cefálica revestida de escamas prateadas, de brilho metálico, e uma pequena figura negra que parece a representação esquemática de uma ave voando. Clipeo quase nulo. Quelíceras largas, de dorso bossulado, avermelhado. Patas I fulvo-escuro, a fimbria das tíbias negra; as outras patas mogno claro. Peça labial e laminas maxilares mogno escuro. Esterno fulvo denegrido. Ancas I mogno escuro, as outras amarelo claro, quase côr de palha. Abdome inteiramente revestido de escamas de brilho metálico, bronze-dourado, tendo no dorso duas grandes manchas formadas por escamas muito alvas; ventre coccineo: a metade mediana mais escura; os lados revestidos de escamas claras.

Localidade tipo: Rio Moraballi.

Col.: R. W. G. Hingston, a quem dedico esta bela espécie.