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A new species of *Falsocaenia* Pic, 1922 from Amazonian Rainforest (Coleoptera: Lycidae) with an updated key to the species

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While searching for Calochromini (Coleoptera: Lycidae) specimens in entomological collections and identifying other Lycidae, a new species of *Falsocaenia* Pic, 1922 was found in the collection of Instituto Nacional de Pesquisas da Amazônia (INPA). This genus is one of the smallest in the tribe Calopterini with 13 known species, two of which were recently described by Bocákova *et al.* (2012) in their revision of the genus, and can be found in Central and South America.

Falsocaenia is characterized by having the pronotum transverse, trapezoidal, with a strong and bifurcate median longitudinal carina, which forms a longitudinal groove in the distal half and the elytron, strongly reticulate, with three longitudinal costae (except for costae four, which forms humeral margin) and by the male genitalia with a slender phallus with distal portion oval or circularly enlarged (Bocákova, 2003; Bocákova *et al.* 2012).

The phylogenetic position of Calopterini genera was discussed in Bocákova (2005), which indicate that *Falsocaenia* is closely related to the Acroleptina clade (*i.e.* *Lycomorphon* Pic, 1922, *Lycinella* Gorham, 1884, *Ceratopriomorphus* Pic, 1922, *Acroleptus* Bourgeois, 1886). However, instead of having apterous and larviform females, as presumed for other acroleptines, *Falsocaenia* females are fully winged (Bocákova *et al.*, 2012). Larvae of this genus remain unknown and few is known about the biology of the species. Herein a description of a new species from Amazonian Rainforest and an updated key to the known species is given.

Material and methods

The specimens were relaxed in hot water and detergent under a stereomicroscope. Photos were taken using a Leica M205C® attached to a computer and a Leica DFC 295 camera. Photographs of genitalia were taken using a SEM Zeiss LEO 440 camera and a Zeiss Microscope Axionskop 2. The photographs were edited in Adobe Photoshop CS6. The specimens used in this study are from INPA and from Museu de Zoologia da Universidade de São Paulo, São Paulo, Brazil (MZSP).

Results

Falsocaenia veracruz Ferreira, new species

(Figs. 1–4)

Diagnosis. *F. veracruz* can be distinguished from other *Falsocaenia* species by the dark brown elytra with yellow humeral spots; the pronotum margins, and antennomeres II and at least apex of antennomeres XI also yellow.

Description. General coloration dark brown, except humeral spots, pronotum margins antennomeres II and apex of antennomeres XI, which are yellow (Fig. 1). Interocular distance twice longer than eye diameter. Head prognathous, mandibles yellowish, hooked. Labrum transverse. Maxillary palp with coloration varying from yellow to dark brown, with segment II 6 times longer than I; III and IV subequal in length, 4 times shorter than II, that is very long compared to the others, the last securiform. Antennae serrate, with antennomeres II and XI yellow (females whole yellow, male only distal half yellow). Pronotum as long as wide, posterior margins slightly divergent, with a longitudinal carina posteriorly divergent, forming a slender areola (Fig. 2). Prosternum V shaped, with an agglomeration of setae at the posterior margin. Pro spiracle tubular. Mesoventrite transverse, connected to mesoepisternum by sternopleural plates.

Mesepimeron expanded, with a conspicuous row of setae. Metaventricle convex, rounded, with metadiscrimen complete, reaching posterior margin of mesoventrite. Legs elongate, slender, generally dark brown. Pro- and mesocoxae short, transverse, more or less oval; metacoxae transverse, slender; trochanters tubular, yellow; femora and tibiae clavate, with the basal tip of the yellow. Elytra 5 times longer than pronotum, widened in the posterior 2/3. Male genitalia symmetrical; median lobe 1.5 times longer than phallobase, broadened distally (Fig. 3), with terminal circular enlargement of phallus 1.5 times wider than parameres width in distal third. Phallobase 2.5 times shorter than median lobe, longitudinal suture absent. Female genitalia slender (Fig. 4), coxites 0.5 times longer than styli. Mediobasal projection sclerotized, directed obliquely. Valvifers shortened, basally fused, forming a ventral bridge, with posterior lateral margins divergent.

Length: 6.0 mm. Width (across humerus): 1.8 mm.

Distribution. Brazil: Amazonas state.

Etymology. The species name was given in honor of the author's grandmother, Vera Cruz Ferreira.

Type material. Holotype 1, ♂: Brasil—Amazonas, Serra dos Porcos, 0°25'N, 69°22'O, VII-1977, Franklin, Moore (INPA). Paratypes 2, ♀: same data as holotype. Paratype 1, ♀: Brasil—Amazonas, Manaus—Campus INPA, 22/III/1988, Amorim, N. col. (MZSP).

Taxonomic remarks. *F. veracruz* sp. n. (Brazilian Amazonian Forest) resembles *F. grisea* Kleine, 1951 (Peru) and *F. ecuadorensis* Bocákova, 2012 (Equator), differing from the first by the absence of the yellow transverse stripe on elytra and from the latter by having the lateral margins of the pronotum yellow.



FIGURES 1–4. *Falsocaenia veracruz* sp. n. 1. Dorsal view. 2. Pronotum and details of antennomeres I–III. 3. Ventral and lateral view of male genitalia. 4. Ventral view of female genitalia. Scale bar = 0,5 mm.

Updated key to the species of *Falsocaenia* (modified from Bocákova *et al.* 2012)

1. Elytra widened distally..... 3
 - Elytra slender, each elytron parallel-sided..... 2
2. Transverse yellow stripe on elytra broad, present in posterior 1/2–4/5 of elytra..... *F. excavatipes* Pic, 1938 (Bolivia)
 - Transverse yellow stripe on elytra slender, present in posterior 1/2–7/12 of elytra..... *F. grisea* Kleine, 1951 (Peru)
3. Each elytron in posterior 1/3 twice wider than humeral width, parameres as long as 3/4 of phallus, reaching to apical phallic constriction..... *F. meridana* Pic, 1922 (Venezuela)
 - Elytra slenderer, up to 1.7x wider in posterior 1/3 than humeral width..... 4
4. Longitudinal and transverse elytral costae orange, inner cells dark brown, distal portion of phallus slender, oval.....
..... *F. aurantiacostata* Pic, 1932 (Colombia)
 - Elytral coloration forming unicoloured portions, distal enlargement of phallus almost circular 5
5. Whole elytra orange, only basal sutural stripe slightly infusate, distal enlargement of phallus circular
..... *F. decipiens* (Gorham, 1884) (Panama and Costa Rica)
 - Elytra partly dark brown to black..... 6
6. Except paired yellow spots elytra dark brown 7
 - Yellow portions of elytra large, usually forming transverse or longitudinal stripes. 8
7. Only posterior spots in apical 1/6 of elytra yellow, distal enlargement of phallus circular, wider than parameres in posterior 1/3...
..... *F. melanopteron* Bocákova, 2012 (Colombia)
 - Most of elytra black, only humeral spots yellow 13
8. Elytral apex yellow..... *F. longehumeralis* Pic, 1931 (Peru)
 - Elytral apex dark brown to black 9
9. Parameres reaching apical 1/8 of phallus, elytra largely yellow, only basal 3/5 of suture, two transverse median spots, and apical 1/6 of elytra dark brown *F. irregularis* Pic, 1931 (Bolivia)
 - Parameres shorter 10
10. Basal 3/5 of elytra largely yellow, only sutural region in basal quarter dark brown, male genitalia slender, distal enlargement circular. *F. paranana* (Pic, 1922) (Argentina)
 - Basal 3/5 of elytra with longitudinal black stripes 11
11. Each elytron with a yellow transverse stripe behind elytral midlength 12
 - Each elytron with a longitudinal black stripe..... *F. incognitus* Kleine, 1942 (Brazil)
12. Pronotum with whole lateral margins yellow, elytra with a transverse black stripe in basal 1/5–1/2, distal enlargement of phallus circular to transversely oval..... *F. apicicornis* (Pic, 1922) (Peru and Colombia)
 - Yellow lateral margins of pronotum slender, each elytron with longitudinal yellow stripe along primary costa 3.....
..... *F. diversecostata* Pic, 1931 (Bolivia)
13. Pronotum margin with lateral and apex of antennomere XI yellow *F. veracruz* n. sp. (Brazil)
 - Pronotum margin and apex of antennomere XI black..... *F. ecuadorensis* Bocákova, 2012 (Ecuador)

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