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Revision of the genus *Fauva* BLACKWELDER, 1952 (Coleoptera, Staphylinidae, Osoriinae) from South America

Heartily dedicated to Prof. Ludwig Beck on the occasion of his retirement in remembrance of our time at the Amazon

Abstract

Specimens belonging to the Neotropical genus *Fauva* (Staphylinidae: Osoriinae) were studied from the following collections: Institut Royal des Sciences Naturelles de Belgique, Bruxelles, Belgium (IRSN); Field Museum of Natural History, Chicago, USA (FMNH); and from a collection from Peru, made available by M. VERHAAGH (Karlsruhe, Germany). The genus and four species are redescribed and the new species *Fauva becki* is described. The genus is divided into two species groups and a key to species is provided.

Key words

Neotropical, Staphylinidae, Osoriinae, *Fauva*, taxonomy, new species

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1. Introduction

In the collection of MANFRED VERHAAGH a species of the genus *Fauva* was found that draw my attention to that genus as part of my studies on the Neotropical Osoriinae. Only 4 species were known from South America, each with only one specimen. During the study, a second specimen of *F. laeviuscula* was detected. The presently known number of 6 specimens of the genus documents the rareness of the species. The long and thick antennae and the setae structure of the head resemble many other coleopteran species hosting in ant nests. Nothing is known about the biology of the species. The three species described by FAUVEL (1902) were found in tabacs; BERNHAUER (1906) also gave no information about the biology. The new Peruvian species presumably lives in or on the forest floor. It is, therefore, not unlikely that the species host in ant nests and rarely leave the nests.

2. Material and Methods

The specimens studied were from the following collections: Institut Royal des Sciences Naturelles de Belgique, Bruxelles, Belgium (IRSN); Field Museum of Natural History, Chicago, USA (FMNH); and from a collection from Peru, made available

by M. VERHAAGH (Karlsruhe, Germany). The latter (new species) will be deposited in Museo de Historia Natural Universidad Nacional Mayor de San Marcos, Lima (MUSM).

3. Systematics

Fauva BLACKWELDER, 1952

1902 *Diplopsis* FAUVEL: Rev. d'Ent., **21**: 33 (type species by subsequent designation *Diplopsis alternans* (LUCAS 1920: 243))

1942 *Diplopsis* – BLACKWELDER: Proc. US Nat. Mus., **92**: 88 (type species by subsequent designation *Diplopsis multicostata* FAUVEL)

1952 *Fauva* BLACKWELDER: Smiths. Inst. U.S. Nat. Mus., **200**: 165 (fixed through objective synonymy with *Diplopsis*)

Description

The genus *Fauva* is conspicuous by many apomorphic characters. It is characterized by the relatively long first two abdominal segments. The antennae are very thick and long, antennal segments of equal length and width. The eyes are very small containing only few ocellae. Similar to many species of the genus *Thoracophorus*, there are three carinae on the head, several carinae or striae on the elytra and pronotum with wide lateral furrows. In contrast to *Thoracophorus* the pronotum has no central depression, but a transverse depression often exists in front of the posterior edge. The structure of the aedeagus is very simple as in *Thoracophorus*.

The presently known species reflect two species groups. The *Alternans* group contains species described by FAUVEL (1902) from tabac plantations of Bahia (Brazil) and by BERNHAUER (1906) from Paraguay. The head in species of this group shows a characteristic structure with a distinct dorsal process that is divided or not. In the first case the forehead is separated from the neck, forehead with distinct central, posteriorly prominent carina carrying several yellow bristles at the posterior angles pointed posteriorly, neck with a distinct central prominence and with several yellow bristles pointed apically. The second group consists of the new species *F. becki* from Peru and presents striae on the head instead of the carina. The head is not divided between forehead and neck. The neck is only separated from the forehead by a transverse stria.

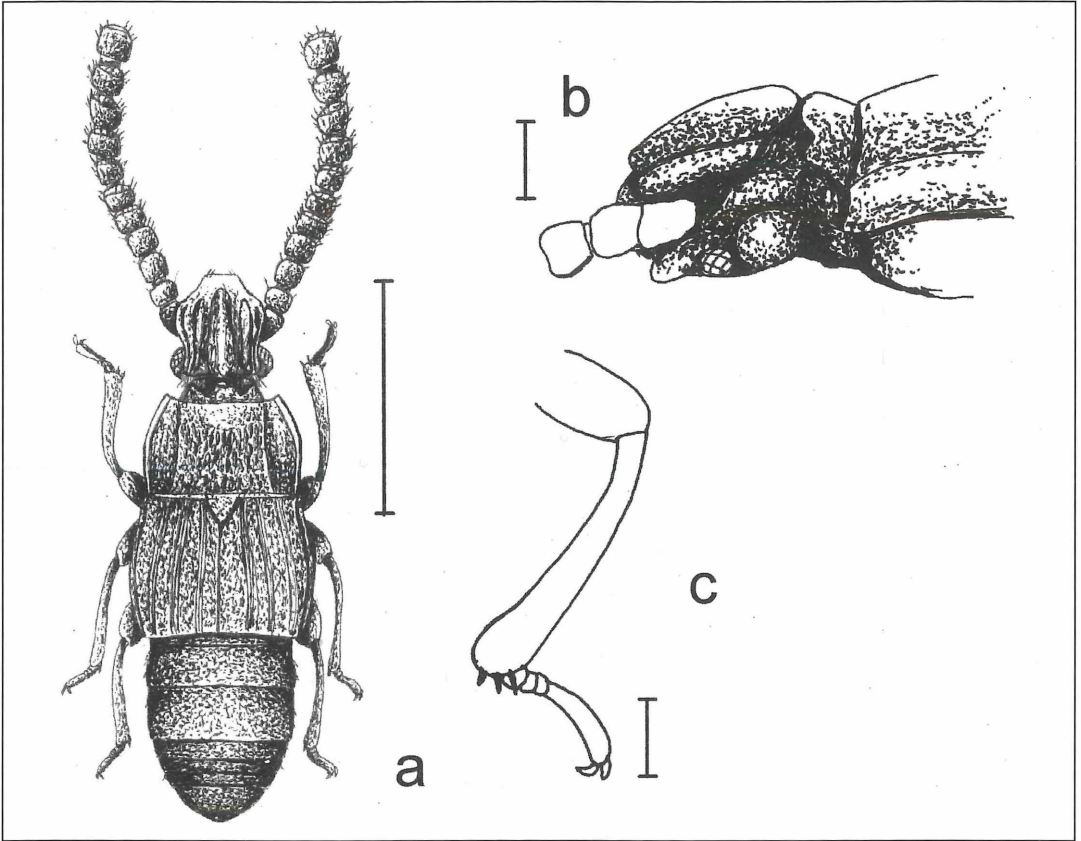


Figure 1. a) *Fauva alternans*; b) head laterally, c) front leg (scale line a: 1 mm; b, c: 0.1 mm).

***Fauva alternans* (FAUVEL, 1902)**

Figures 1, 2-2a-c

1902 *Diplopsis alternans* FAUVEL: Rev. d'Ent., 21: 34

Description

Length 2.2 mm, colour black, elytra red, abdomen and legs reddish, abdominal tergites posteriorly yellow. Head 0.5 mm long, 0.35 mm wide; antennae longer than head and pronotum, thick, wider than eyes, segments globular, basal segments as thick as apical segments, each segment with few yellow bristles, last segments with more bristles than basal segments, head with wide lateral furrow behind antennae, neck separated from forehead by a deep furrow, eyes small, on a distinct lateral prominence, forehead with a longitudinal central carina widened posteriorly, a small longitudinal depression on the wide part of the central carina, between central carina and lateral margin another smaller carina carrying several yellow bristles pointed posteriorly, central and lateral carina diminished in front of the clypeus, temples very short, neck wide, dorsally with a strong prominence behind the central promi-

nence of the forehead. Pronotum 0.45 mm long, 0.5 mm wide; widest at posterior edge, sides more or less parallel, narrowed to the front edge in the apical third, between lateral margin and disc a wide smooth furrow, disc with a transverse depression in front of the posterior edge, coriaceous punctate, punctures longitudinally coriaceous, apical third of disc without punctuation, smooth. Elytra 0.55 mm long, 0.7 mm wide; polished, without punctuation, on the disc with three groups of striae, each group containing three fine striae ending shortly in front of the posterior edge, distinctly wide at posterior edge than at apical edge. Abdomen with fine longitudinal striae, segments 2 to 5 laterally with few yellow bristles, segments 5 and 6 also dorsally with few bristles, all segments with very short scaly hairs.

The species is conspicuous within the *alternans*-group by the smooth apical third of the pronotum and the three groups of three striae each on the elytra.

Material examined

Brazil: Salvador de Bahia, in tabac plantation, without further data (holotype: IRSN).

***Fauva multicostata* (FAUVEL, 1902)**

Figures 2-1a-c

1902 *Diplopsis multicostata* FAUVEL: Rev. d'Ent., 21: 34

Description

Length 2.2 mm, colour black, elytra red, abdomen and legs reddish, abdominal tergites posteriorly yellow. Head 0.45 mm long, 0.3 mm wide; antennae longer than head and pronotum, thick, wider than eyes, segments globular, basal segments as thick as apical segments, each segment with few yellow bristles, last segments with more bristles than basal segments, head without punctuation, with wide lateral furrow behind antennae, neck separated from forehead by a deep furrow, eyes small, on a distinct lateral prominence, the longitudinal central carina not thicker at posterior end than at apical end, central and lateral carina diminished in front of the clypeus, temples very short, neck wide, dorsal prominence of neck with a longitudinal central depression. Pronotum 0.4 mm long, 0.5 mm wide; widest at posterior edge, sides more or less parallel in the posterior half, in the apical half narrowed to the front edge, between lateral margin and disc a wide smooth furrow, disc with a transverse depression in front of the posterior edge, coriaceous punctuate, a short smooth space behind the apical edge smooth. Elytra 0.6 mm long, 0.65 mm wide; polished, without punctuation, elytra with 7 fine carinae. Abdomen with fine longitudinal striae, segments 2 to 5 laterally with few yellow bristles, segments 5 and 6 also dorsally with few bristles, all segments with very short scaly hairs.

Within the *Alternans*-group the species is characterized by the coriaceous punctuation of the pronotum that nearly reach the apical edge and the distinct carinae of elytra.

Material examined

Brazil: Salvador de Bahia, in tabac plantations, without further data (holotype: IRSN).

***Fauva laeviuscula* (FAUVEL, 1902)**

Figures 2-3a-c

1902 *Diplopsis laeviuscula* FAUVEL: Rev. D'Ent., 21: 35

Description

Length 2.3 mm; colour black, elytra red, abdomen and legs reddish, abdominal tergites posteriorly yellow. Head 0.5 mm long, 0.4 mm wide; antennae longer than head and pronotum, thick, wider than eyes, segments globular, basal segments as thick as apical segments, each segment with few yellow bristles, last segments with more bristles than basal segments, head with wide lateral furrow behind antennae, neck separated from forehead by a deep furrow, eyes small, on a distinct lateral prominence, the longitudinal central carina thicker at posterior end than at apical end and without longitudinal depression on it, central and lateral carina dimin-

ished in front of the clypeus, temples very short, neck wide. Pronotum 0.4 mm long, 0.55 mm wide; widest at posterior edge, sides more or less parallel in the posterior half, in the apical half narrowed to the front edge, between lateral margin and disc a wide smooth furrow, a deep depression within the furrow in front of the posterior edge, disc with fine longitudinal punctuation, apically finer punctuate, a wide space behind the apical edge without punctuation, smooth. Elytra 0.65 mm long, 0.75 mm wide; polished, without punctuation, elytra with three fine striae, each stria divided by a fine line, the striae diminished in the posterior third. Abdomen with fine longitudinal striae, segments 2 to 5 laterally with few yellow bristles, segments 5 and 6 also dorsally with few bristles, all segments with very short scaly hairs. The species can be differentiated from the related species of the *alternans*-group by the fine punctuation of the pronotal disc and the fine striae of the elytra.

Material examined

Brazil: Salvador de Bahia, in tabac plantations, without further data (holotype: IRSN); Serra de Navio (Amapá), 1.6.1990, leg. DEGALLIER (FMNH).

***Fauva laevipennis* (BERNHAEUER, 1906)**

Figure 3

1906 *Diplopsis laevipennis* BERNHAUER: Verh. Zool.-Bot. Ges. Wien, 56: 323

Description

Length 2.6 mm; colour black, antennae piceous, elytra and abdomen dark red. Head 0.6 mm long, 0.3 mm wide; 2. segment of antennae globular, the following segments oblong, segments 6 to 8 slightly longer than the proceedings, head without punctuation and very weak longitudinal micro-reticulation, nearly polished, widest between base of antennae, strongly narrowed to the front edge, sides between base of antennae and front edge slightly emarginate, from the neck to the disc an obtuse process, that is margined ventrally by a very deep furrow pointed to the venter of the neck, a smaller furrow laterally parallel to the process, eyes very small, it seems to consist only of one ocella, a supraocular line between base of antennae and the deep furrow. Pronotum 0.5 mm long, 0.75 mm wide; with fine and sparse punctuation on then apical 2/3 of the disc, this part posteriorly margined by a transverse line, between this line and the posterior edge with a deep and coarse punctuation, in the front part with weak micro sculpture, shining, posterior part dull, front part of the disc with a distinct midline, pronotum broadly margined, margin very flat, without punctuation and very weak micro sculpture, nearly polished. Elytra 0.7 mm long, 0.9 mm wide, with very fine micro punctuation and weak longitudinal micro sculpture, shining, apical margin distinct and straight, on the disc with three lines, distinct at the base and obsolete in front of

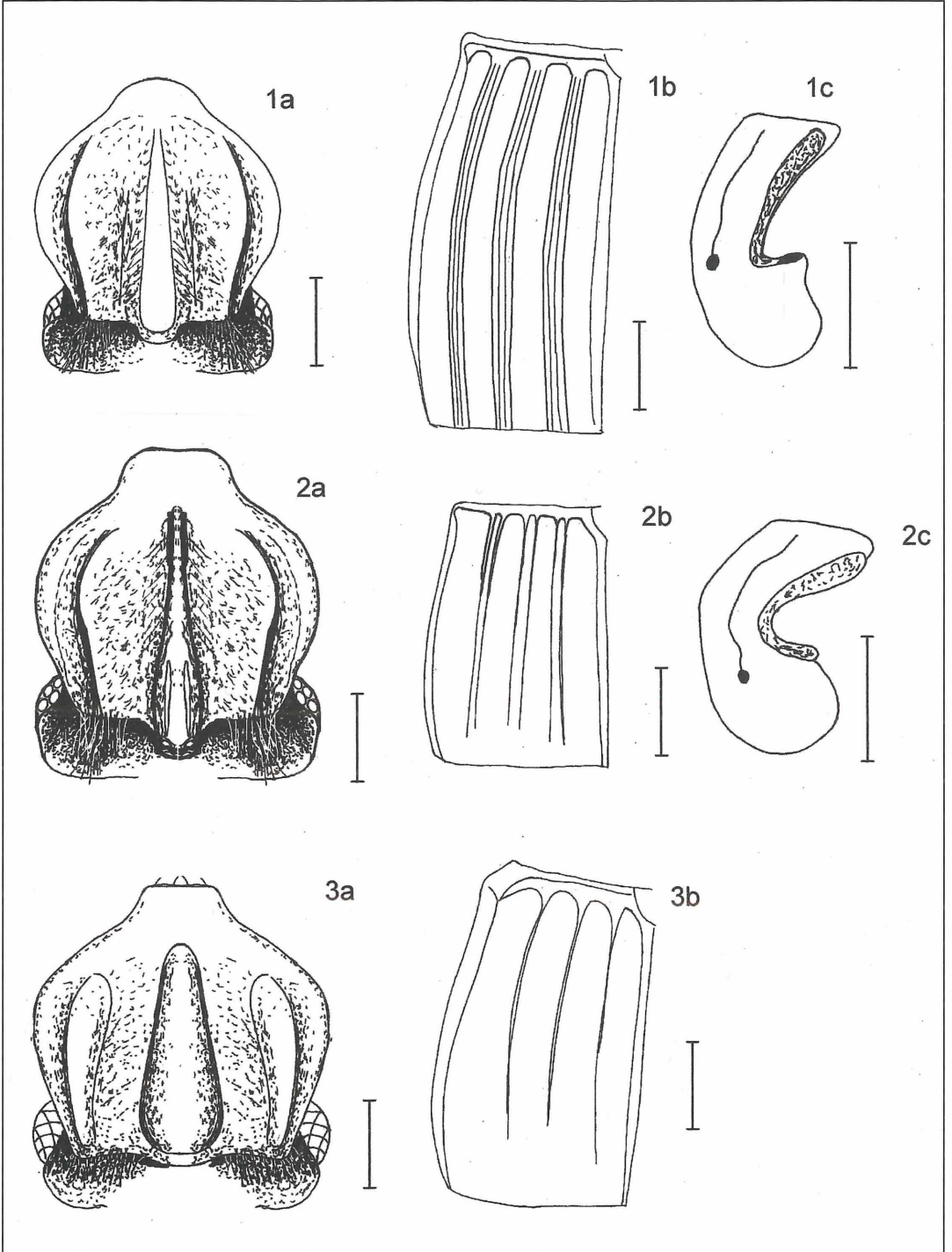


Figure 2.1) *Fauna multicostata*, 2) *F. alternans*, 3) *F. laeviuscula* (a: front head, b: elytra, c: aedeagus; scale line 0.1 mm).

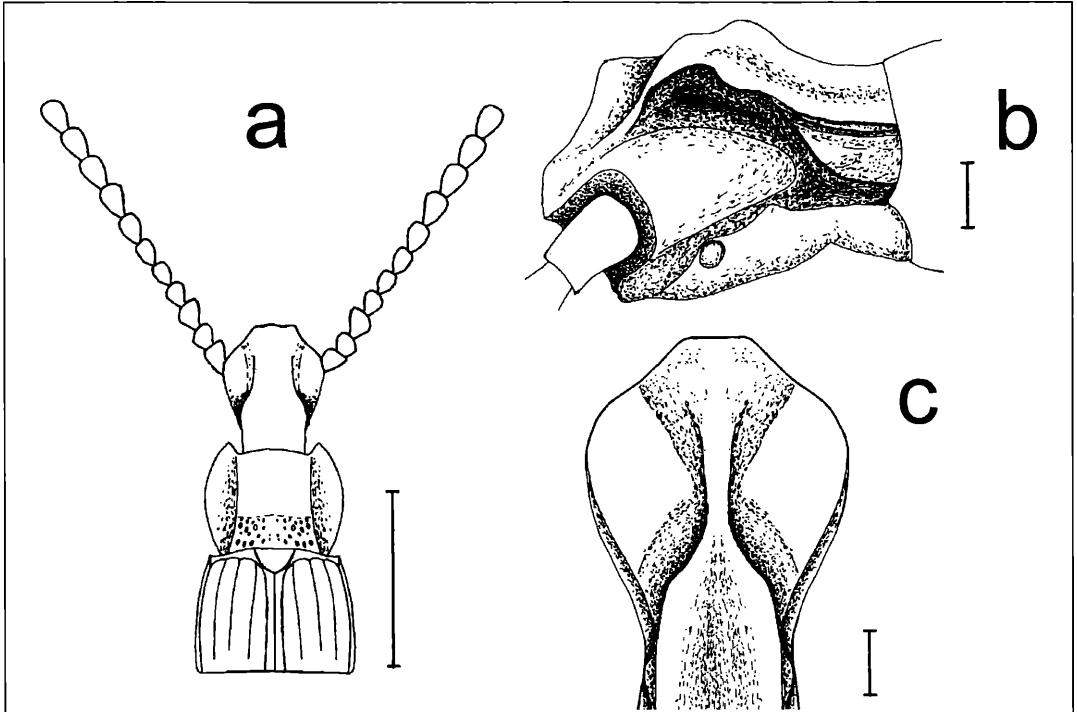


Figure 3. *Fauva laevipennis* a) front body, b) head in lateral view, c) head in dorsal view (scale line for a: 1mm, b and c: 0.1 mm).

the posterior edge. Abdomen with dense and fine punctuation, dull, punctures weak on the 6. segment, 6. tergite laterally and in the middle with a row of three pairs of tubercles, each carrying a scale-like hair, segments 4 to 6 laterally also with scale-like hairs.

Material examined

Paraguay: 23.4.1886, leg. DRAKE (holotype: FMNH)

Fauva becki new species

Figures 4a-d

Holotype: Male from Peru: Departamento Huánuco, Rio Yuyapichis, Biol. Station "Panguana" (9°37'S, 74°56'W, ca. 260 m), caught by a pitfall trap in a pasture (BF3), 10.-24.10.1984, leg. M. VERHAAGH (MUSM)

Description

Length 1.7 mm; colour piceous, front angles of pronotum, posterior edge of elytra and posterior edge of abdominal tergites red, legs yellow. Head 0.3 mm long, 0.28 mm wide; antennae thick, two times thicker than eyes, longer than head and pronotum, each segment twice as wide as long, head without punctuation, posteriorly with fine coriaceous ground sculpture, clypeus, quadrate, emarginate laterally between front edge and base of antennae, with longitudinal, central distinct carina, lateral carinae less distinct, temples

very short, eyes in a small lateral depression, very small not more than 10 ocellae, behind the eyes without furrow, neck separated from forehead by a fine transverse line. Pronotum 0.3 mm long, 0.4 mm wide; smallest at the apical edge, in front of the posterior angles shortly parallel, lateral margin distinct, thick, at parallel part an indistinct depression, finely punctate, with weak longitudinal microsculpture, shining. Elytra 0.3 mm long, 0.5 mm wide; widest at the posterior edge, at the base with similar punctuation as pronotum, posterior half without punctuation, smooth, two very fine longitudinal lines instead of the usual carinae that do not reach the posterior edge, without lateral margin, a short carina behind the shoulders indicate the rest of the margin, scutellum very small; abdomen with short scaly yellow hairs.

The species is conspicuous by the small size and the extremely thick antennae. In contrast to the other species of *Fauva*, the head is without exclusive structures, only some indistinct ridges present, the lateral furrows of the pronotum scarcely present and the carinae on the elytra very indistinct.

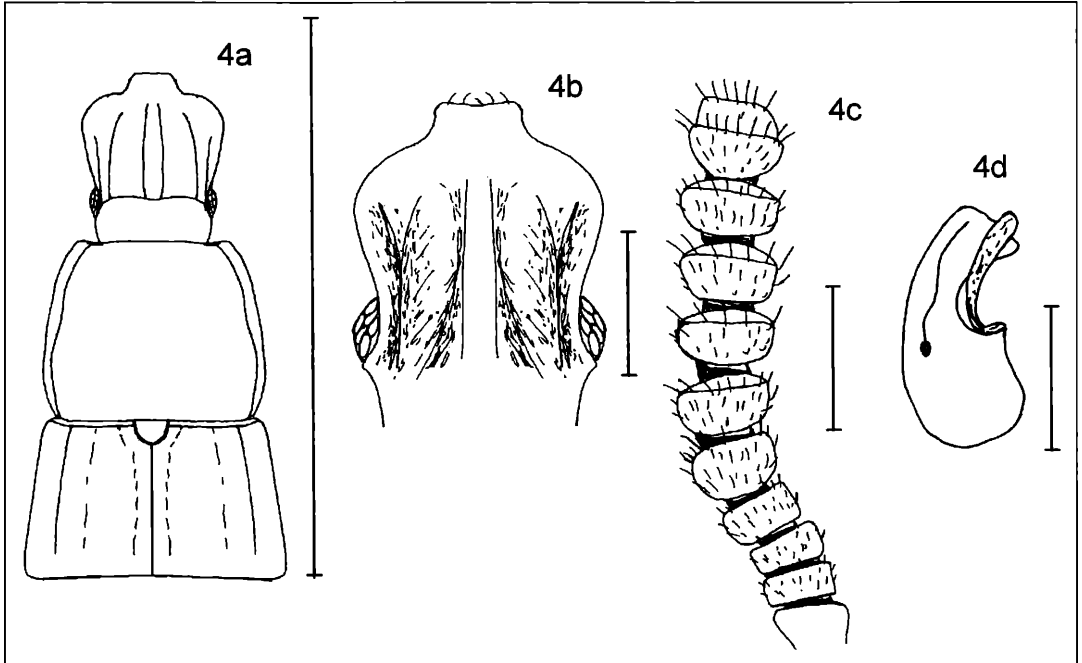


Figure 4. *Fauva becki* a) front body, b) head, c) antenna, d) aedeagus (scale line 0.1 mm).

Key to the species

1. Head with a more or less large process between neck and forehead, that is separated from the venter of the head by a deep depression 2
 - Head without such a conspicuous structure dorsally, smooth, only with few fine longitudinal lines *F. becki* n. sp.
2. Process of head separated in an apical and posterior part, with distinct central carina and neck with distinct prominence pointed to the apex *F. laevipennis* (BERNHAUER)
 - Process of head not separated, separation only conspicuous by a transverse stria 3
3. Pronotum at least partly with coriaceous punctuation, elytra with distinct striae or carinae 4
 - Pronotum with fine punctuation, the apical half nearly smooth, elytral striae fine and ending in the posterior half *F. laeviuscula* FAUVEL
4. Apical third of pronotum smooth without punctuation, elytra with three groups of three striae each *F. alternans* (FAUVEL)
 - pronotum with coriaceous punctuation, only a small space behind the apical edge without punctuation, elytra with 7 carinae *F. multicosata* (FAUVEL)

Acknowledgements

I am thankful to the following institutes and curators who graciously provided material used in this study: Institute Royal des Sciences Naturelles de Belgique, Brussels, Dr. D. DRUGMAND (IRSN); the Field Museum of Natural History, Chicago, Dr. A. NEWTON (FMNH). I also thank MANFRED VERHAAGH, who made his material collected at the Biological Station Panguana, Peru, available for my studies. Thanks are also due to Dr. L. ZERCHE, Deutsches Entomologisches Institut, Eberswalde, for his helpful comments.

4. Literature

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