

## A new species of *Scolopsomorpha* with description of nymphal instar (Hemiptera: Fulgoromorpha: Tropiduchidae)

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### Abstract

A fourth species of the genus *Scolopsomorpha* Melichar, 1912, *S. pericarti* n. sp. is described from the Democratic Republic of Congo. Fifth nymphal instar is described. An updated key to the species of the genus is proposed. *Habitus*, male genitalia and nymph are illustrated and a distribution map is provided.

**Keywords:** *Scolopsomorpha*, Canopy fogging, larva, Congo River expedition 2009.

### Introduction

As expected in the revision of the genus (CONSTANT, 2009), recent collections by canopy fogging in Congo have brought an additional new species in the genus *Scolopsomorpha* (Melichar, 1912). Nymphs of this species have also been collected, allowing first description of nymphal instar for the genus.

### Materials and methods

The material has been treated as in CONSTANT, 2009.

Acronyms used for the collections (name of the curator in parentheses).

RBINS: Royal Belgian Institute of Natural Sciences, Brussels, Belgium (P. Grootaert, W. Dekoninck).

### Taxonomy

#### Family Tropiduchidae Stål, 1866

#### Genus *Scolopsomorpha* Melichar, 1912

### Identification key to the species of *Scolopsomorpha*

1. Frons shiny black or red-brown, clypeus white, body broader: LTg/BTg < 3.7 . . . . . **2**
  - Frons and clypeus dark brown, body elongate: LTg/BTg > 3.7 . . . . .  
. . . . . ***S. africana* Melichar, 1912**
2. Frons shiny black . . . . . **3**
  - Frons red-brown . . . . .  
. . . . . ***S. pericarti* Constant, 2013**
3. Sides of frons with pale yellow line before eyes . . . . . ***S. boulandi* Constant, 2009**
  - Frons totally black . . . . .  
. . . . . ***S. debakkeri* Constant, 2009**

#### ***Scolopsomorpha pericarti* n. sp.**

Figs 1 A–F, 2 A–G, 3.

**Etymology.** The species is dedicated to the late great French Entomologist, Dr. Jean Péricart, whose work and human qualities are regarded as an example by the author.

**Material examined.**

Holotype ♂ (dissected, right hind wing mounted): [Coll. I.R.Sc.N.B., Congostream Expedition, Democratic Republic of the Congo, Mbangi, 2°07'N 21°44'E, Canopy Fogging, Fog 3, Old Secondary Forest, 24.VI.2009]

Paratype ♀ (cephalic process broken): same data. 1 nymph: same data.

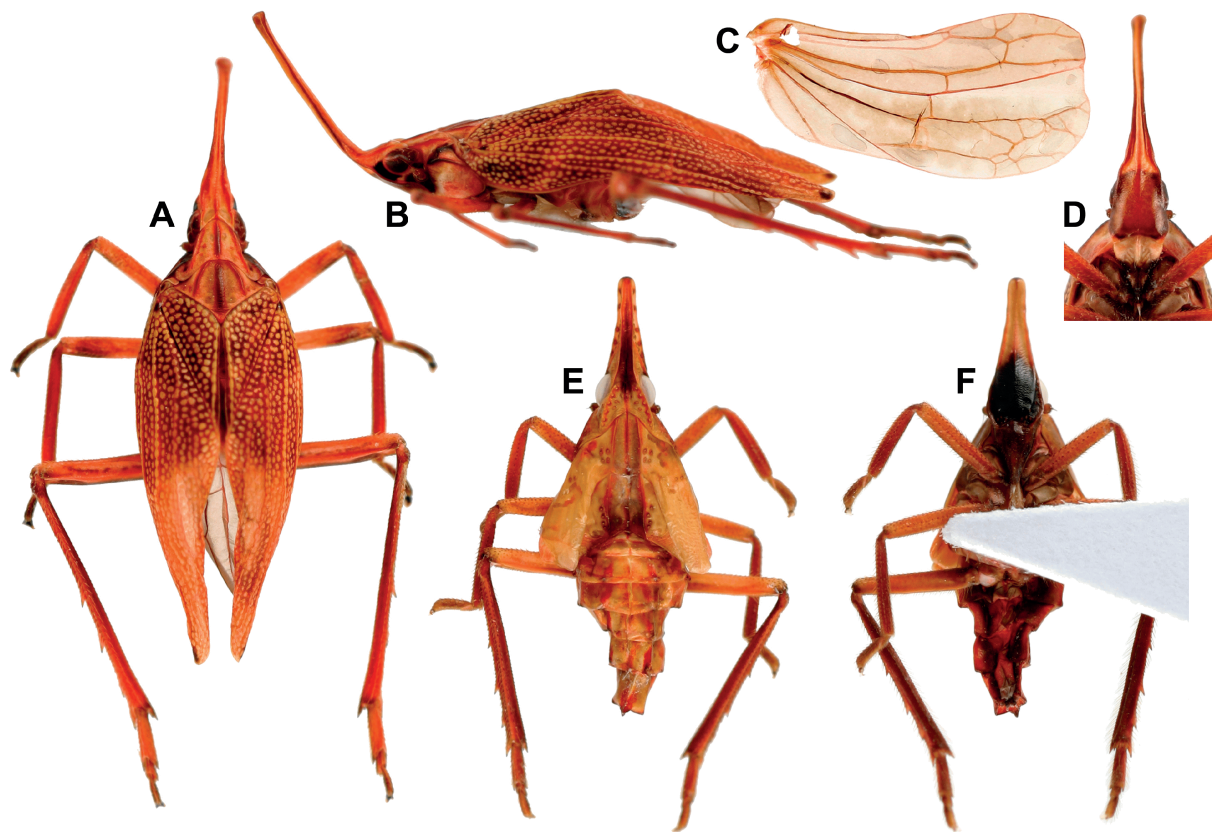


Fig. 1. A–F. *Scolopsomorpha pericarti*. A, habitus, dorsal view. B, habitus, left lateral view. C, right hind wing. D, head, ventral view. E, 5<sup>th</sup> instar nymph, dorsal view. F, 5<sup>th</sup> instar nymph, ventral view.

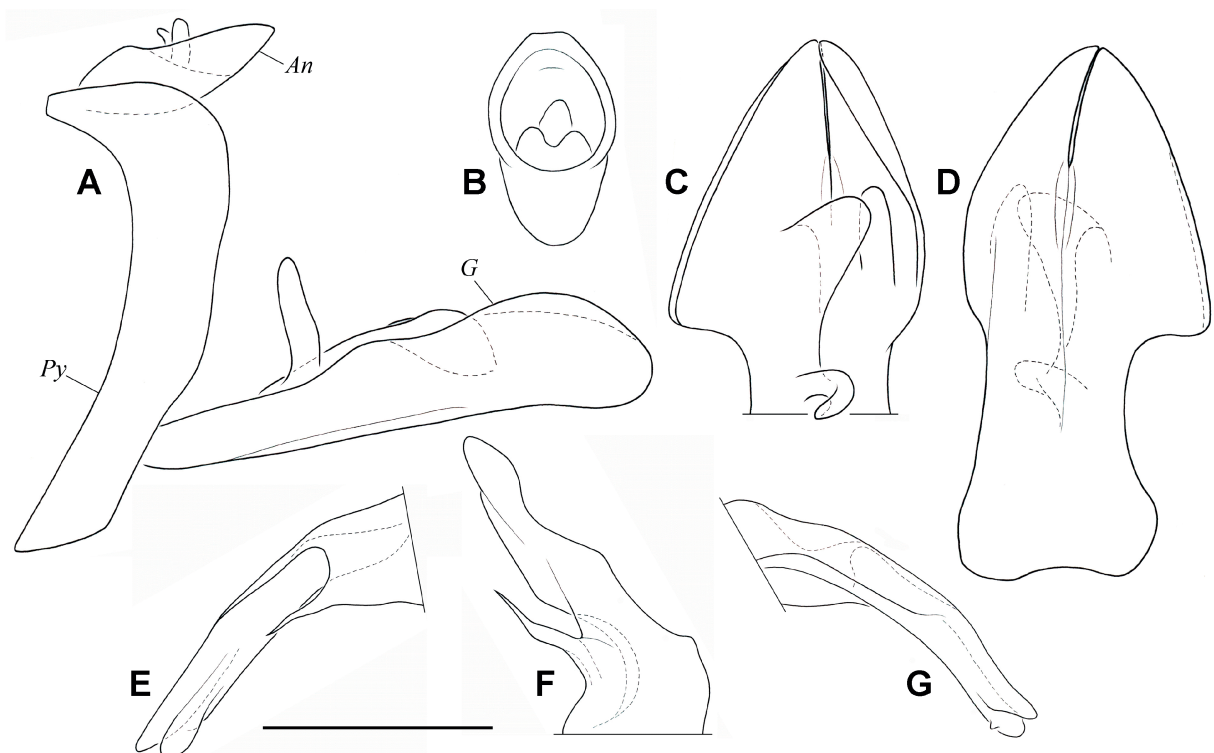


Fig. 2. A–G. *Scolopsomorpha pericarti*, genitalia ♂. A, pygofer, anal tube and gonostyli, left lateral view. B, anal tube, dorsal view. C, gonostyli, dorsal view. D, gonostyli, postero-ventral view. E, phallic complex, right lateral view. F, phallic complex, dorsal view. G, phallic complex, left lateral view. An: anal tube; G: gonostyli; Py: pygofer. Scale 1mm.

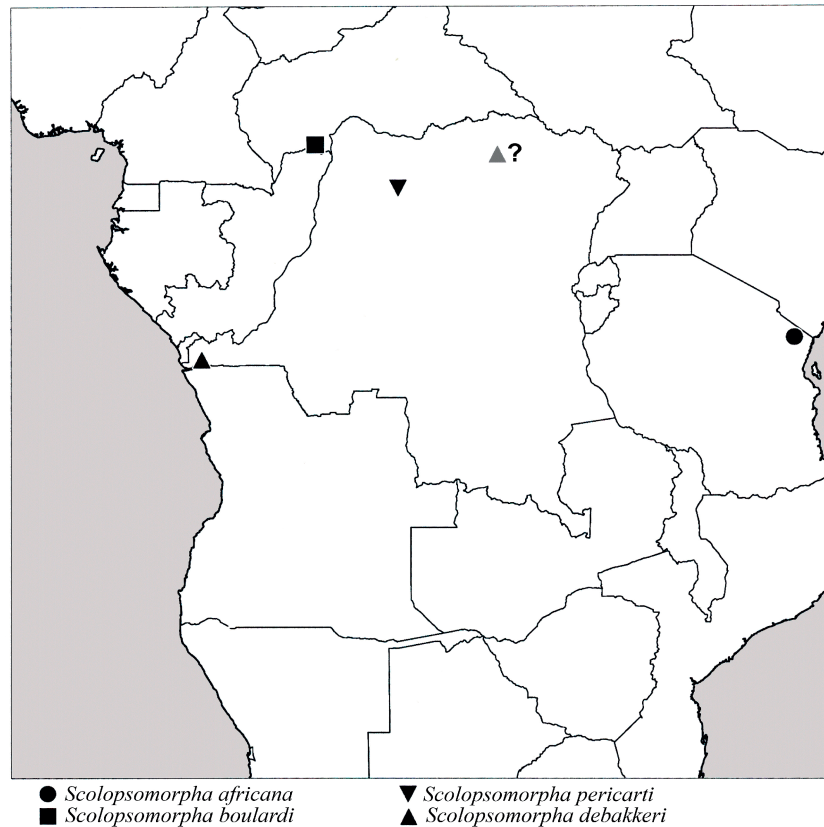


Fig. 3. Distribution of the four species of *Scolopsomorpha* in Africa.

**Diagnosis.** The species is easily recognized by the frons red-brown and the clypeus yellow-white (Fig. 1 A), the cephalic process strongly projecting antero-dorsad (Fig. 1 B), the black markings on the genae (Fig. 1 B).

**Description.** LT: ♂ (n = 1): 10.5 mm. L [anterior margin of eye – apex of tegmina]: 7.8 mm.; ♀ (n = 1): L [anterior margin of eye – apex of tegmina]: 8.2 mm

**Head:** pale yellow with carinae of vertex red (Fig. 1 A); genae with one black patch before eye and another under eye, including base of antenna (Fig. 1 B); frons red-brown, darker on sides, with 3 longitudinal carinae obsoletely distinct on disc, the median one slightly marked with red (Fig. 1 D); process projecting antero-dorsad, with apex and lateral line red-brown; median carina of vertex reaching apex of process (Fig. 1 A, B, D); clypeus yellow-white with apical half back-brown except sides (Fig. 1 D); scape brown, pedicel yellow-brown; ratio BV/LV = 0.18; BF/LF = 0.27.

**Thorax:** pro-, mesonotum and tegulae pale yellow-brown with carinae red-brown; pronotum with brown-black spot at posterior angles of disc (Fig. 1 A); latero-dorsal carinae of prothorax brown-black (Fig. 1 A–B); lateral pleura of

prothorax pale yellow-brown with oblique, broad yellow-white band (Fig. 1 B); ratio LP+LM/BT = 1.06; LM/LP = 1.6.

**Tegmina:** tubercles pale yellow-brown; ground colour black-brown, more or less suffused with red; small apical, smooth, black-brown spot (Fig. 1 A–B); ratio LTg/BTg <3.7 [costal margin curled during drying process so that precise measurement is impossible].

**Hind wings:** brown with veins dark brown to red (Fig. 1 C).

**Legs:** (Fig. 1 A) red-brown with tarsi of legs I and II brown; coxae I and II pale yellow-brown; coxae III brown; all trochanters brown; base of tibiae I and II, apex of femora I and II ventrally and femora III ventrally, brown.

**Abdomen:** red-brown.

**Genitalia** ♂: pygofer narrow and curved in lateral view, broader latero-dorsally (Fig. 2 A); gonostyli elongate, fused on basal 4/5 and with digitate process dorsally; right gonostylus strongly emarginate laterally and with hook-shaped process dorsally near base; left gonostylus strongly sinuate laterally in middle (Figs. 2 C, D); anal tube dorso-ventrally compressed, suboval in dorsal view (Fig. 2 B); phallic complex directed ventrad and strongly curved rightwards (Figs 2 E–G); in right lateral

view, basal, pointed process, and apex bilobous (Fig. 2 E); in left lateral view, apex bilobous, with small process (Fig. 2 G).

Biology. All examined specimens have been caught by canopy fogging in Congo.

**Nymph** (5<sup>th</sup> instar)

Figs 1 E-F

LT: 7.6 mm.

*Head*: pale yellow-brown with vertex red-brown, disc of frons black and clypeus brown; carinae red; sides of cephalic process with numerous sensory pits; lateral margins of vertex strongly carinate; cephalic process narrower dorsally; head strongly elongate; BV/LV = 0.25; BF/LF = 0.4.

*Thorax*: pale yellow-brown with carinae and median line red; disc of pronotum with 2 strong longitudinal carinae; carinae with a row of 7 sensory pits internally and a row of 3 sensory pits externally; 2 sensory pits between carina and median line on each side; 5 sensory pits above lateral carina of prothorax; mesothorax with 2 strong longitudinal carinae on disc and group of 4 sensory pits on external side of carina; anterior wings with 2 sensory pits basally; metanotum with 2 strong longitudinal carinae on disc and a row of 4 sensory pits along carinae externally; hind wings covered by anterior wings.

*Abdomen*: pale yellow-brown with 3 red longitudinal carinae; tergites 3-6 with 3 sensory pits on each side, along posterior margin, one

dorsally and 2 latero-dorsally; sternites brown laterally.

*Legs*: red-brown with femora paler; densely covered with hairs.

**Discussion**

It seems obvious that more species of *Scolopsomorpha* still await discovery and description, and that canopy fogging is the adequate technique to collect them. The only reliable way to identify the species is the examination of the male genital structures. Also, the identification of a female specimen from Bambesa as *Scolopsomorpha debakkeri* Constant, 2009 in CONSTANT (2009) is regarded as doubtful (question mark on the updated map, Fig. 3).

**Acknowledgments**

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**References**

- CONSTANT J., 2009. - Revision of the Afrotropical genus *Scolopsomorpha* (Hemiptera: Fulgoro-morpha: Tropiduchidae). *Zootaxa*, 2219: 38-48.
- MELICHAR L., 1912. - Monographie der Dictyophorinen (Homoptera). *Abhandlungen der K. K. zoologisch-botanischen gesellschaft in Wien*. VII (1), 1-221, pls. 1-5.
- STÅL C., 1866. - Hemiptera Homoptera Latr. *Hemiptera Africana*, 4: 1-276.