

## **A new Afrotropical species of *Metamicroptera* HULSTAERT, 1923 with the first record of *M. rotundata* HULST. from Zambia (Lepidoptera: Arctiidae)**

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Abstract. *Metamicroptera christophi*, a new Afrotropical species is described and illustrated. Lectotypes of *Metamicroptera rotundata* HULSTAERT, 1923 and its two synonyms *Balacra paradoxa* HERING, 1932 and *B. paradoxa* ROMIEUX, 1934 are designated. *M. rotundata* HULST. is for the first time recorded from Zambia.

Key words: Lepidoptera, Arctiidae, *Metamicroptera*, new species, distribution, Afrotropical region, Zambia.

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*Metamicroptera* is one amongst several very characteristic, small genera of Thyretini known only from one sex. As in *Neophemula* (OBERTHÜR, 1904), *Takwa* KIRIAKOFF, 1957 or *Pseudodiptera* KAYE, 1918 only the males are known. *Thyrogonia* (HOLLAND, 1898) and *Pseudmelisa* HAMPSON, 1910 on the contrary, are only represented by females. It is very probable that this situation is caused by the strong sexual dimorphism. Some genera will most probably be synonymized in the future as they simply are composed by specimens of the opposite sex but of the same species. Resolving this problem however needs further intensive field work: collecting as well as rearing.

Specimens of a new representative of the genus *Metamicroptera* were found after detailed examination of undetermined Lepidoptera material deposited in the museums in Pretoria and London.

Designation of lectotypes and paralectotypes of *M. rotundata* and its synonyms revealed some inaccuracies and errors in literature citation and labeling of type specimens, this is discussed and clarified in the present paper.

A single specimen of *M. rotundata* from Zambia is the first record for this country and although it does not enlarge significantly the known area of distribution of the species it is worth mentioning taking into account the lack of such information for most African countries.

Abbreviations for collections in which the material is deposited are as follows:

MHNG – Muséum d'Histoire naturelle, Genève (B. LANDRY);

MRAC – Musée Royal de l'Afrique Centrale, Tervuren (U. DALL'ASTA);

NHML – The Natural History Museum, London (G. MARTIN, M. HONEY);

TM – Transvaal Museum, Pretoria (B. DOMBROWSKY)

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### Genus *Metamicroptera* HULSTAERT, 1923

*Metamicroptera* HULSTAERT, 1923: 408-409.

Type species: *Metamicroptera rotundata* HULSTAERT, 1923 (by original designation).

*Neobalacra* KIRIAKOFF, 1952: 79. - KIRIAKOFF, 1953: 75 (as synonym of *Metamicroptera*).

Type species: *Balacra paradoxa* HERING, 1932 (by monotypy).

*Micrometaptera* KIRIAKOFF, 1960: 3, 5, 62 (an incorrect subsequent spelling of *Metamicroptera* HULSTAERT, 1923).

### *Metamicroptera christophi* sp. n.

(Figs 1-7)

**M a t e r i a l e x a m i n e d.** **Holotype** (male): **Zambia** - "Nkana, N. Rhod., Nov. '33, Mrs. PRISMAL" (TM) (G. sl. nr P94) [12°49'S 28°11'E]

**Paratype** (male): **Tanzania** - "Mhonda, Turiani, Dec. 1966., I. ROBERTSON", "Brit. Mus., 1968-684" (NHML) [6°12'S 37°57'E]

**D i a g n o s i s.** The new species is very similar to *M. rotundata*. It is however much smaller. The white, semitransparent patches on the forewing are much reduced. The eye is smaller and flattened, not convex like in *M. rotundata*. Scales on thorax and abdominal tergites are short, flat, adherent in contrast with the much longer, hair-like scales of *M. rotundata*. Frons and proximal part of coxae are white. In male genitalia cornuti are about ten times longer than wide, while in *M. rotundata* they are distinctly shorter.

**D e s c r i p t i o n.** Male. (Figs 1-2). Length of forewing: 14 mm.

Head brownish black with greenish shine; frons white; genae red; labial palpi short, straight; antennae serrate in 2/3 distally, greenish shiny from above. Thorax dark with greenish shine from above; white blotch on basal part of tegulae; red blotch beneath each wing. Legs concolorous with thorax except for mostly white fore coxae and indistinct white blotches on the tip of middle and hind coxae. Forewing dark with greenish shine; 5 white, semitransparent patches between R5-An except for M1-M2 and one in the discoidal cell; cilia concolorous with wings; underside similar to upper side with additional white, blurred patch in dorso basal area reaching white patch between Cu2-An. Hindwing small, reduced, mostly white, suffused with dark in the costal and dorsal area; cilia on termen white. Underside similar but white coloration reduced to discoidal cell and area between cell and inner margin. Abdomen dark with greenish shine; 1, 4 and 5 tergites with red bands; 3 tergite with red patches laterally; 2 sternite white; 3-5 sternites with red lateral patches connected with related patches on tergites.

Genitalia (Figs 4-5): Uncus narrow, elongate, somewhat flattened laterally, pointed apically; tegumen much shorter than vinculum; pedunculus relatively short, broad; vinculum long, narrow, connected with tegumen well behind base of costa of valva; saccus long, slender, somewhat broadened apically; valva broad, short; costa with a short, upcurved process at apex; aedeagus straight, long, narrow; vesica with eight to twelve middle-sized cornuti.



1



2



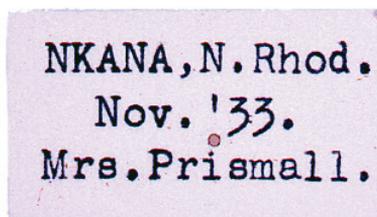
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7



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3



5

Figs 1-7. *Metamicroptera christophi* sp. n.: 1 – holotype, male, upperside; 2 – underside; 3 – label; 4 – genitalia; 5 – aedeagus; 6 – paratype male upperside; 7 – paratype male underside.

Female. Unknown.

**R e m a r k s.** The paratype differs from the holotype in the coloration of the sternites: 3-6 sternites with orange-red transverse bands slightly narrowed medially (Figs 6-7).

**E t y m o l o g y.** The species is dedicated to my older son Christoph.

***Metamicroptera rotundata* HULSTAERT**

(Figs 8-11)

*Metamicroptera rotundata* HULSTAERT, 1923: 409.

*Balacra paradoxa* HERING, 1932: 107. – KIRIAKOFF, 1953: 75 (as synonym of *rotundata*).

*Balacra paradoxa* ROMIEUX, 1934: 143-144. - ROMIEUX, 1934a: 109-110. - ROMIEUX, 1946: 267 (as synonym of *B. paradoxa* HERING).

**M a t e r i a l e x a m i n e d.** *M. rotundata* HULSTAERT: **Lectotype** male (here designated) – “TYPE [red label]; Musee du Congo, Elisabethville, G. SWALUE; R. DET. X 984; *Metamicroptera rotundata* HULST. Type ♂” des. Ł. PRZYBYŁOWICZ (MRAC) [11°44’S 27°29’E]; **Paralectotype** male – same data as lectotype.

*B. paradoxa* HERING: **Lectotype** male (here designated) – “Lubumbashi, Elisabethville, 12.1926., Ch. Seydel” des. Ł. PRZYBYŁOWICZ (MRAC) [11°44’S 27°29’E]; **Paralectotype** male – same data as lectotype.

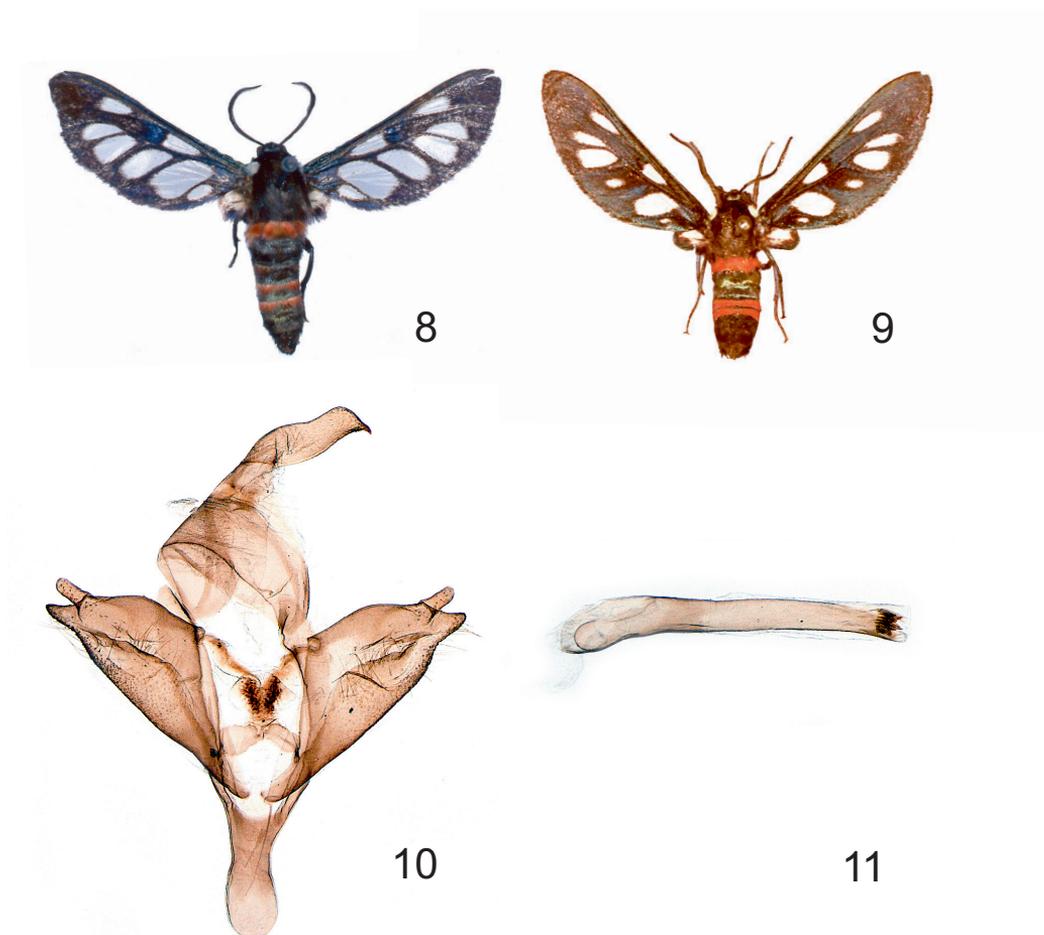
*B. paradoxa* ROMIEUX: **Lectotype** male (here designated) – “Balacra Wlk. Paradoxa Rmx ♂ type!; Ht Katanga, Tshinkolobwe, 10.11.30., J. ROMIEUX, [white rounded label with red edge]” des. Ł. PRZYBYŁOWICZ (MHNG) [160 km NW ad Lubumbashi]; **Paralectotypes** 11 males – Ht Katanga, Tshinkolobwe, 8.11.30., 10.11.30., 13.11.30., 27.1.31., 28.1.31., 23.10.30. (a la lampe), 13.11.30. (aberration), J. ROMIEUX; Ht Katanga, Sakania, 30.11.31., 3.12.31., 6.12.31., 13.12.31., J. ROMIEUX (MHNG) [12°73’S 28°57’E].

**Other specimens:** **Democr. Rep. of the Congo (Zaire):** Elisabethville (NHML – 2♂♂); Elisabethville 10.12.1930., Ch. SEYDEL (MRAC – ♂) [11°44’S 27°29’E] **Zambia:** N Rhodesia, Nchanga (TM – 1♂) [12°31’S 27°52’E]

**D i a g n o s i s.** The species differs from *M. christophi* by its bigger size, uniformly dark frons, bigger, convex eyes, hair-like scales on the thorax and the abdominal tergites, dark coxae of all legs and distinctly shorter cornuti in the male genitalia.

**D e s c r i p t i o n.** Male. (Fig. 8). Length of forewing: 17 mm. Head brownish black with bluish shine; genae red; labial palpi short, straight; antennae serrate in 2/3 distally, bluish shiny from above. Thorax dark with bluish shine from above; white blotch on basal part of tegulae; red blotch beneath each wing; legs concolorous with thorax except for lighter hair-like scales along ventral margin of hind femur. Forewing dark with bluish shine; 6 white, semitransparent patches between R5-Dorsum except for M1-M2 and one on basal half of discoidal cell; cilia concolorous with wing; underside similar to upper side with additional white, blurred patch in dorso basal area reaching white patch between Cu2-An; An prominently curved towards costa in half of its length. Hindwing small, reduced, mostly white, suffused with dark in costal and dorsal area; cilia on termen white. Underside similar but white coloration reduced to discoidal cell and area between cell and inner margin. Abdomen dark with bluish shine; 1, 4 and 5 tergites with red bands; 3 tergite with red patches laterally; 2 sternite white; 3, 4, 5 sternites with red lateral patches connected with related patches on tergites.

**Genitalia** (Figs 10-11) (from the specimen from Elisabethville, 10.12.1930. compared with the lectotype): Uncus narrow, elongate, somewhat flattened laterally, pointed apically; tegumen much shorter than vinculum; pedunculus relatively short, broad; vinculum long, narrow, connected with tegumen well behind base of costa of valva; saccus long, slender, somewhat broadened apically; valvae broad, short; costa with a short, upcurved process at apex; aedeagus straight, long, narrow; vesica with eight to twelve middle-sized cornuti.



Figs 8-11. *Metamicroptera rotundata* HULSTAERT: 8 – lectotype, male, upperside; 9 – male, upperside (paralectotype of *B. paradoxa* ROMIEUX labeled “Ht Katanga, Tshinkolobwe, 13.11.30., J. ROMIEUX; *Balacra paradoxa* RMX. (aberration)”); 10 – genitalia; 11 – aedeagus.

Female. Unknown.

**D i s t r i b u t i o n** of *M. rotundata* HULSTAERT was studied in details by KIRIAKOFF (1953) on the base of numerous specimens housed in MRAC. In addition, a few specimens found in some other institutions did not add more information on the distribution of the species (KIRIAKOFF 1954).

MEDLER (1980) includes *M. rotundata* in his checklist as one of the species which considering its known range is very likely to be found in Nigeria.

Examination of the Thyretines housed in the TM revealed a single specimen collected in Zambia, Nchanga. This is the first record of *M. rotundata* from this country. The species is at present known from three African countries: Democratic Republic of the Congo (Zaire), Rwanda and Zambia.

**C o m m e n t s.** The description of *Balacra paradoxa* ROMIEUX, 1934 was published simultaneously in two periodicals (title, contents, illustrations and even the arrangement on the pages are the same: ROMIEUX 1934, 1934a). The second paper has been published in *Bulletin de la Societe Lepidopterologique de Geneve* 7(3) which is “Extrait du *Bulletin de la Societe Entomologique Su-*

isse, Vol. XVI, No. 3, Sept. 1934.” and therefore the citation of the original description should be as follows:

*Balacra paradoxa* ROMIEUX, 1934, *Mitteilungen der Schweizerischen Entomologischen Gesellschaft* (=Bulletin de la Societe Entomologique Suisse) **16**(3): 143-144, col. pl. 4.

The type series of *Balacra paradoxa* ROMIEUX, 1934 consists of 19 specimens which should be deposited in Museum d'Histoire naturelle, Genève. The search for them revealed only 12 specimens, among them the 2 specimens illustrated on pl. 4 of the description. The specimen depicted on fig. 5 of this plate (Tshinkolobwe, 10.II.30. [see below for proper date]) is herein designated as lectotype. The specimen depicted on fig. 6 of this plate is no more than a color form with slightly reduced transparent patches on the fore wings (Fig. 9).

The collecting dates, i.c. the month, of the specimens illustrated on pl. 4 are incorrect. The original labels bear handwritten dates in Arabic numerals wrongly transformed by ROMIEUX to Roman numerals. The specimens figured should be cited as collected: Tshinkolobwe, 10.11.30. and Tshinkolobwe, 13.11.30. respectively.

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