

## Redescription of the genus *Melisoides* STRAND, 1912 (Lepidoptera: Arctiidae) with notes on its synonymy

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**Abstract.** The Afrotropical monotypic genus *Melisoides* STRAND is redescribed. The re-description of *Melisoides lobata* STRAND, 1912 as well as new data on the distribution of the genus are provided. *Collartisa* KIRIAKOFF is synonymized with *Melisoides* STRAND (new synonym). Two new synonyms of *Melisoides lobata* STR. are proposed: *Paramelisa bitjeana* BETHUNE-BAKER, 1927 and *Collartisa collarorum* KIRIAKOFF, 1953. Photographs of the adults and male and female genitalia are included.

**Key words:** Lepidoptera, Arctiidae, *Melisoides*, taxonomy, Afrotropical region.

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### I. INTRODUCTION

*Melisoides* is an Afrotropical genus established by STRAND (1912) for its single species *Melisoides lobata* STR. GAEDE (1926) suggested that the species is a synonym of *Paramelisa lophura* AURIVILLIUS, 1905. This opinion was followed by SEITZ (1930) who treats the two species as synonyms. The figure on plate 5f of his "Grossschmetterlinge der Erde" is in fact a female of *M. lobata*. Subsequently KIRIAKOFF (1953) established the new genus *Collartisa* for the new species *C. collarorum* which in the original description was also compared with *P. lophura*. It seems probable that at that time he did not know STRAND's species. Later however, in his review of Thyretini types from the Berlin Museum (1959), and to the contrary of both previous authors, he treated *Melisoides* as a valid genus closest to the *Melisa* WALKER, 1854. The same opinion was stated in his chapter of "Genera Insectorum" from 1960. Curiously enough he never compared *Melisoides* with *Collartisa*.

Reexamination of the type series of *C. collarorum* from the Musée Royal de l'Afrique Centrale (MRAC) revealed that it is a synonym of *M. lobata*. The investigation of the types of Thyretini in the British Museum of Natural History (BMNH) by the first author resulted in the discovery that *Paramelisa bitjeana* BETHUNE-BAKER, 1927 is also conspecific with *M. lobata* and consequently should be synonymized with it.

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

NHM – the Natural History Museum, London;

BRINS – Belgian Royal Institute of Natural Sciences;

MNHU – Museum für Naturkunde der Humboldt-Universität, Berlin;

MRAC – Musée Royal de l'Afrique Centrale, Tervuren;

MNHN – Muséum National d'Histoire Naturelle, Paris;

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## II. TAXONOMY

### Genus *Melisoides* STRAND

*Melisoides* STRAND, 1912, Archiv für Naturgeschichte, 78(A)6: 192-193.

Type species: *Melisoides lobata* STRAND, 1912 (by original designation). KIRIAKOFF 1959: 188-189, KIRIAKOFF 1960: 6.

*Collartisa* KIRIAKOFF, 1953, Annales du Musée Royal du Congo Belge Tervuren, 26: 81. Type species: *Collartisa collartorum* KIRIAKOFF, 1953 (by original designation). KIRIAKOFF 1960: 8. **New synonym.**

**D i a g n o s i s.** The genus *Melisoides* is most similar to *Melisa* and *Paramelisa*. It differs from the first one by the presence of the narrow, transverse yellow stripes on the abdominal tergites. The second genus, *Paramelisa*, may be easily separated by its mat colouration of the forewings. The male genitalia of *Melisoides* differ from those of *Melisa* and *Paramelisa* by having an elongated saccus. The female genitalia of *Melisoides* differ from those of *Melisa* and *Paramelisa* by the pair of parallel, deep depressions on the antevaginal plate.

### *Melisoides lobata* STRAND

(Figs 1-13)

*Melisoides lobata* STRAND, 1912: 193; GAEDE 1926: 118; SEITZ 1930: 56; KIRIAKOFF 1959: 186, 188; KIRIAKOFF 1960: 6; MEDLER 1980: 353.

*Paramelisa bitejana* BETHUNE-BAKER, 1927: 321-322; KIRIAKOFF 1957: 159; KIRIAKOFF 1960: 7. **New synonym.**

*Collartisa collartorum* KIRIAKOFF, 1953: 81-82; KIRIAKOFF 1957: 160; KIRIAKOFF 1960: 8; MEDLER 1980: 353. **New synonym.**

**M a t e r i a l e x a m i n e d:** **holotype** female labelled – [EQUATORIAL GUINEA] “Span. Guinea, Benitogbt., 16-31.10.06. G. TESSMANN S. G. [blue label]; 3790; Alen [blue label]; Type [red label]; *Melisoides lobata* m. STRAND det. ♀” (MNHU) (G. sl. Nr - P 78) /1°35'N 9°35'E/

**Lectotype** male, **paralectotype** female of *P. bitejana* labelled – [CAMEROON] “Bitye. 2000 ft, Ja River, Cameroons, G. L. BATES; G. T. B.-Baker Coll., Brit. Mus. 1927-360.; Type” (NHM) /3°42'N 13°33'W/

**Holotype** male of *C. collartorum* labelled - [DEMOCR. REP. OF THE CONGO (ZAIRE)] “Coll. Mus. Congo, Equateur: Bokuma, 28.12.1941., Rev. P. HULSTAERT; *Collartisa collartorum* sp. n.; HOLOTYPUS [red label]; Holotype [pink label]” (MRAC) /0°06'S 18°42'E/

**Paratype** female of *C. collartorum* labelled – [DEMOCR. REP. OF THE CONGO (ZAIRE)] “Coll. Mus. Congo, Lulua: Kapanga, 3.1933., G. F. OVERLAET; PARATYPUS [red label]; Paratype [pink label]” (MRAC) /8°21'S 22°35'E/

Other material (17): 11 males, 6 females (labelled as follows).

CAMEROON: Urwald Manyemen, 31.5.05., Arnold SCHULTZE (MNHU – ♂♀) /5°13'N 9°24'E/

Johann-Albrechts Hohe Station, 1896, L. CONRADT (NHM – ♀) /4°10'N 9°13'E/

Eloumden, 24/25.10.1992., Th. BOUYER (MRAC – ♂) /3°49'N 11°26'E/

DEMOCR. REP. OF THE CONGO (ZAIRE): Kivu, Kabunga, 600-700 m, 5.6.1945., Alberic DUFRANE (BRINS – ♂) /6°08'S 25°11'E/

Uele, Paulis, 10.9.1957., 21.10.1959., Dr M. FONTAINE (MRAC – 2♂♂) /2°46'N 27°37'E/

Maniema, Kindu, 1917., L. BURGEON (MNHN – ♂) /2°57'S 25°56'E/

Sankuru, Katako-Kombe, 3.12.1951., Dr M. FONTAINE (MRAC – ♀) /2°58'S 23°53'E/

Lulua, r. Kasai-Luneni, 19.2.1932., G. F. OVERLAET (MRAC – ♂) /8°15'S 21°51'E/

Tshuapa, Bamanya, 26.12.1957., R. P. HULSTAERT (MRAC – ♂); 1937. R. P. HULSTAERT (MRAC – ♂♀); /0°00' 18°20'E/

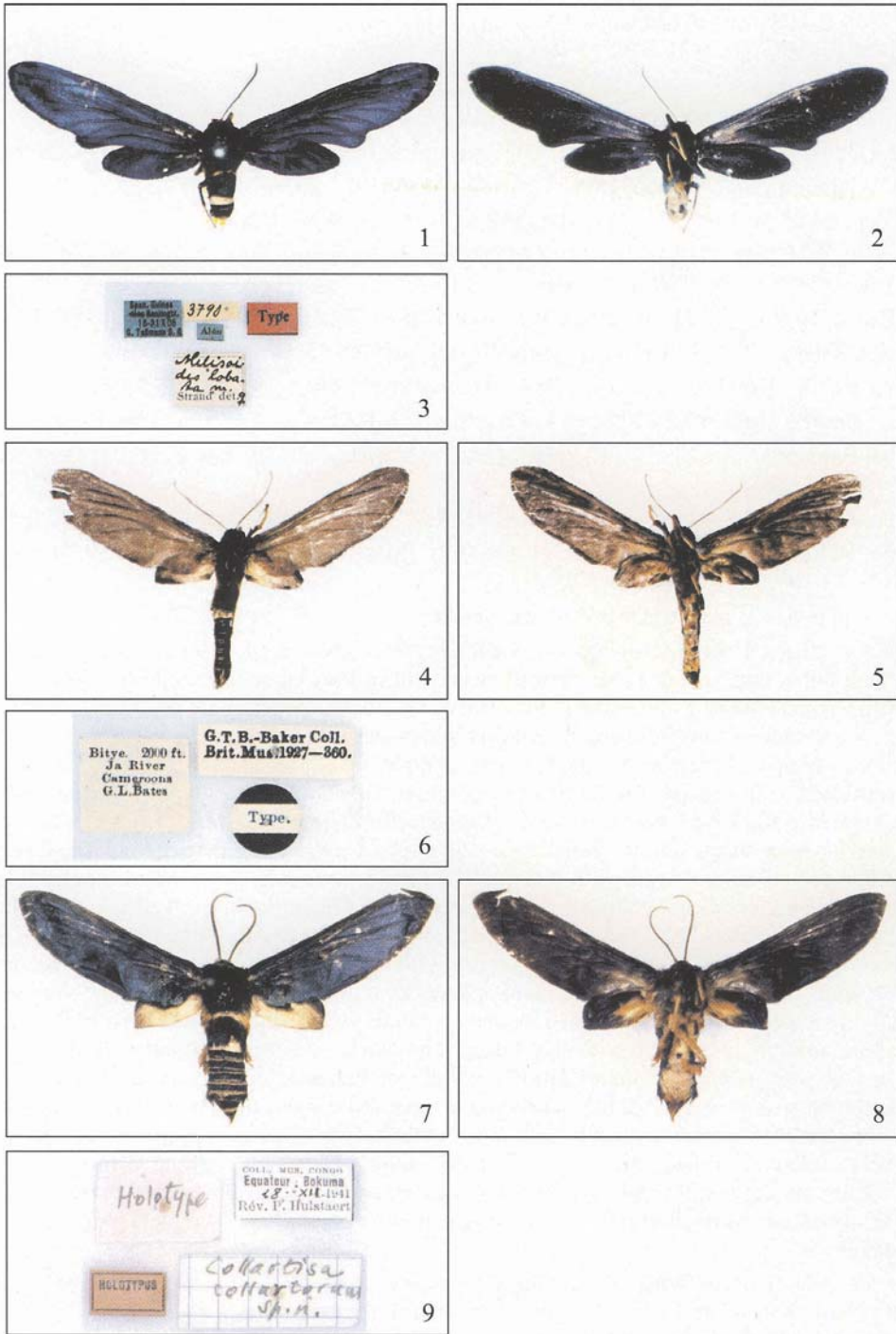
Tshuapa, Eala, 3.1935., Mme J. GHESQUIERE (MRAC – ♂♀) /0°04'N 18°17'E/

Tshuapa, Bokuma, 21.12.1951., R. P. HULSTAERT (MRAC – ♂); 31.1.1952., R. P. HULSTAERT (MRAC – ♀) /0°65'S 18°42'E/

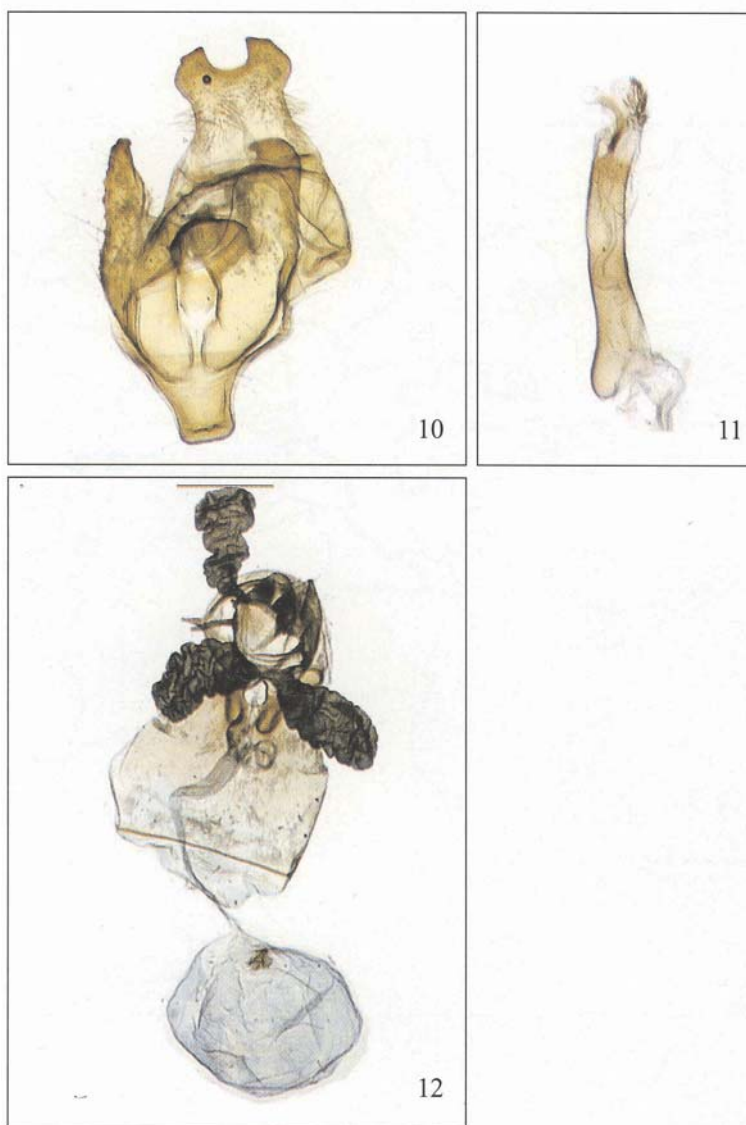
**D i a g n o s i s.** As described for the genus.

**D e s c r i p t i o n.** Male (Figs 4-5, 7-8). Length of forewing: 17-19 mm. *Head*: small, black with bluish shine; scapus of antenna, vertex and occiput yellow; labial palpus short, segment 2 and 3 approximately as long as wide; antenna filiform; eye medium sized, naked; proboscis rudimentary. *Thorax*: black, unicolorous from above; anterior and posterior margin of patagia yellow; tymbal organs absent; tympanal membrane small, rounded, directed ventro-distally. *Legs*: femur with long hairs; hind legs with one pair of short terminal spurs; tarsus of fore leg yellow, remaining parts blackish; middle and hind leg with femur and tarsus yellow. *Forewing*: black, with bluish to purple shine; dorsum very short; vein R<sub>1</sub> from discal cell; CuA<sub>1</sub>, CuA<sub>2</sub> almost perpendicular to inner margin; middle part of inner margin with distinct lobe bent downwards; dorso-basal area to the CuA<sub>2</sub> without scales; underside concolorous with upper side. *Hindwing*: reduced; yellow with outer part blackish; underside black; ScR<sub>1</sub> and M<sub>1</sub> stalked in about half the distance of cell; M<sub>2+3</sub> fused; CuA<sub>1</sub> from very near the angle. *Abdomen*: basal tergite with orange-yellow anterior margin; second tergite with wide, light-yellow, transverse band on anterior margin, distal margin orange-yellow; each of remaining tergites with two narrow transverse, orange-yellow lines: one in the middle, a second on the distal margin, last tergite with anal tuft of long hairs; each sternite light-yellow with single, black, mesal spot. *Genitalia*: uncus large, sclerotized, flattened dorso-ventrally, bifid apically, forming the horseshoe shape, slightly narrowed in the middle, hairy part; tegumen broad with deep dorsal concavity; vinculum with elongate dully ended saccus; saccus approximately as long as wide; valva relatively broad; cucullus moderately elongate terminally, slightly curved inwardly, about 1/4 of valva in length; aedeagus heavily sclerotized, robust, much longer than valva, vesica with a group of numerous short spines and a single, narrow, strongly curved plate longer than width of aedeagus.

Female. Length of forewing: 20-23 mm. Like male except: *Thorax*: patagia black, only anterior margin yellow. *Forewing*: CuA<sub>1</sub>, CuA<sub>2</sub> directed towards termen; the lobe reduced to slight enlargement of tornus. *Hindwing*: concolorous with forewing; ScR<sub>1</sub> and M<sub>1</sub> stalked near the base of cell; M<sub>2+3</sub> stalked about two third of the length, from lower outer angle of cell. *Abdomen*: tip of the last tergite orange without tuft of long hairs. *Genitalia*: Anal papillae moderate; posterior apophyses almost twice as long as anterior apophyses; dorsal and ventral pheromone glands deep, conspicuous, similar in size, “brain”-shaped, ventral pheromone glands with common base; antevaginal plate



Figs 1-9. *Melisoides lobata* STRAND, holotype female: 1 – upperside, 2 – underside, 3 – labels; *Paramelisa bitjeana* BETHUNE-BAKER, lectotype male: 4 – upperside, 5 – underside, 6 – labels; *Collartisa collartorum* KIRIAKOFF, holotype male: 7 – upperside, 8 – underside, 9 – labels.



Figs 10-12. Male and female genitalia of *Melisoides lobata* STRAND: 10 – male, 11 – aedeagus, 12 – female.

with a pair of deep, ovate depressions, parallel to each other; ductus bursae almost straight, moderately long, membranous; corpus bursae membranous; signum small but conspicuous, rounded, with middle depression; ductus seminalis slender, arising behind antrum.

**B i o l o g y.** No information. Collection records indicate that the adults are available in all months except April, July, August and November. They probably fly throughout the year.

**D i s t r i b u t i o n.** The single representative of the genus is known so far from The Democratic Republic of The Congo (Zaire), Cameroon and Equatorial Guinea but is probably wider spread in the rainforest zone of the Zaire Basin.

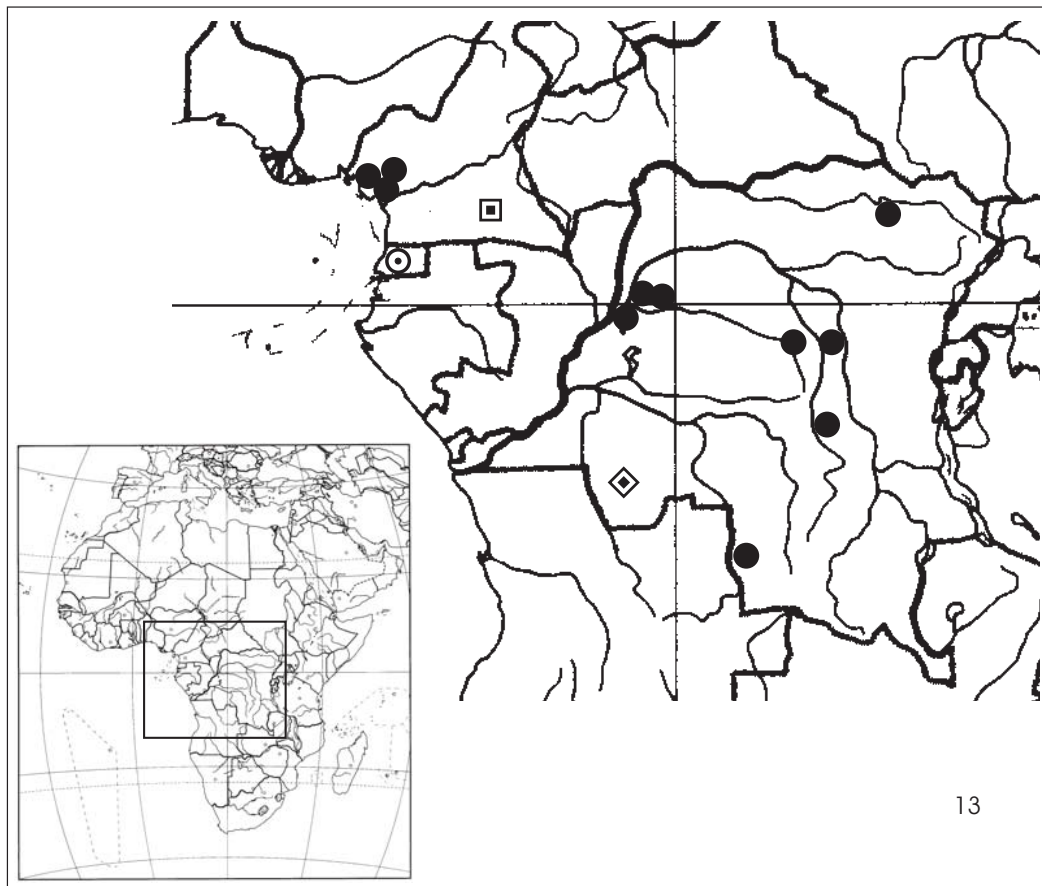


Fig. 13. Distribution of *M. lobata* in Africa: ⊙ – type locality of *M. lobata*, □ – type locality of *P. bitjeana*, ◇ – type locality of *C. collartorum*, ● – other localities.

KIRIAKOFF (1959) noted that there is a discrepancy between the type locality of *M. lobata* as mentioned in the original description (STRAND 1912) and on the labels attached to the type specimen, but this remark is not justified as is clearly shown on Fig. 3. Alen is a small village at the foothills of Benito Mt. close to the Atlantic Coast. It is – most probably – the place where Mr Günther Tessmann was living while collecting the moths in the nearest vicinity.

**R e m a r k s.** The intensity of yellow and black colouration of the legs may slightly vary in different specimens. The narrow, yellow, medial band on tergites and black dots on sternites may be invisible in some specimens when the abdomen is shortened through telescoping of the segments.

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