On the genera *Simesia* KIRIAKOFF, 1955 and *Parasimesia* nov.gen.with description of two new species (Lepidoptera: Notodontidae)

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Abstract

A review of the genus *Simesia* KIRIAKOFF, 1955 is given. *Hoplistis olmii* BERIO, 1937 is placed as a junior synonym of *Simesia dasychiroides* (BUTLER, 1898). The lectotype of *Stauropus critobulus* FAWCETT, 1916 is designated. A new genus, *Parasimesia* nov.gen., which is related to *Simesia*, is described with *Parasimesia makeda* nov.sp. from Kenya as type species.

From Somalia a second species in this genus is described: *Parasimesia menelik* nov.sp. from Somalia.
Zusammenfassung


*Simesia* KIRIAKOFF, 1955: 340

**Type-species:** *Stauropus dasychiroides* BUTLER, 1898 by original designation.

**Synonym:** *Critobulus* KIRIAKOFF, 1963: 350

**Type-species:** *Stauropus critobulus* FAWCETT, 1916 by original designation.

*Critobulus* KIRIAKOFF, 1963 is a junior homonym of *Critobulus* DISTANT, 1903: 59 (key), 77, which was erected for Insecta: Hemiptera. *Critobulus* KIRIAKOFF, 1963 therefore is not available, but it is also a junior synonym of *Simesia* KIRIAKOFF, 1955 due to the synonymy of *S. dasychiroides* and *critobulus*.

*Simesia dasychiroides* (BUTLER, 1898)

(Figs. 1-5, 14, 15, 19)

Originally described as: *Stauropus dasychiroides* BUTLER, 1898: 433; pl. 32: 12.

**Type locality:** [Kenya], Maziwa, Mitatu [approx. 3°40'S 38°50'E].

**Holotype:** ♀, 27.iii.1897, in The Natural History Museum, London by monotypy, illustrated here (fig. 1).

**Synonym:** *Stauropus critobulus* FAWCETT, 1916: 726, pl. 1: 12. (Figs. 4-10, 14, 15)

**Type locality:** [Kenya], B. E. Africa, Kedai [approx. 3°16' S, 38°22'E].

**Lectotype:** ♂, 25.xi.1911, by present designation, in The Natural History Museum, London. The lectotype is illustrated in fig. 5.

The taxon was described after 2 ♂♂. To stabilize the nomenclature the author hereby designates as lectotype a ♂ in the holdings of The Natural History Museum, London with the following labels: "STAUROPUS critobulus | FAWCETT. | Type"; "B.E. Africa: | Kedai. | 25.xi.1911. | W. Feather. | 1920-225"; circular red-ringed label "Type | H. T. "; yellow label: "Photo done by | A. Schintlmeister | #9247".

The second specimen has same collecting data and becomes a paralectotype. The genitalia were dissected, BM 404 and are illustrated here (fig. 15).

KIRIAKOFF, 1963 erected for *Stauropus critobulus* an own (monotypic) genus but placed one year later (KIRIAKOFF, 1964: 201) *critobulus* as a subjective synonym of *dasychiroides.*
Synonym: *Hoplitis olmii* Berio, 1937 nov.syn.

Originally described as: *Hoplitis Olmii* Berio, 1937: 381.

Type locality: [Somalia], Somalia ital., Ogaden, Uarder [= Sciouli Uarder, approx. 4°35'N 45°32'E].

Holotype: ♂, iv. 1936, by original designation. The type depository is unknown.

*Hoplitis olmii* Berio, 1937 was placed by KiriaKoff, 1964: 79 in *Simesia* as "incertae sedis". From the original description, which was not accompanied by an illustration, it became evident, that by the size (wingspan of the male 40 mm, female 47 mm) and the orange coloured antennae ("antenne ocree") *olmii* belongs to *Simesia*. The detailed description of the wing pattern leads to the synonymy of *olmii* with *dasychiroides*. The latter name takes the priority.

Diagnosis: The traced holotype of *dasychiroides* does not match the illustration of the original description in its colour, which shows brown instead of grey forewings. The antennae are complete orange coloured and pectinations bipectinated in both sexes until the tip; the last 5% of the antennae are naked. The males vary in their forewing colour from greyish-white to grey. The discal spot of the forewings marked as a somewhat indistinct larger circular fuscous spot. The hindwing of the male is white with small black markings in the anal angle. The paralectotype of *critobulus* (fig. 4) display the discal blotch very indistinct.

The sexual dimorphic females display a broad fuscous postmedian area until the margin. Two females (of n=13) have very dark basal and median area of the forewings, which contrasts to the grey postmedian field. The orange antennae are bipectinated as in the male, but the rami are shorter.

The male genitalia are characterized by the shape of the wide bilobed uncus. Both uncus arms are bifurcate. The soci are slightly curved, long and slender. The valves are robust and strong sclerotized and not divided. The apex of the valve bears a small process with a pointed tip. The phallus is long and characteristically curved. In the paralectotype the second part of the phallus is missing and the first contains a field of a few spines (cornuti). The 8th sternite is characteristically sclerotized and bears no processes. Both 8th abdominal segments are slightly ventrally bilobed.

The female genitalia have triangular shaped papillae anales. The 8th abdominal segment smooth and not serrated as seen in *makeda*. The base of the ductus bursae (ostium) is stronger sclerotized and displays a pair of diagnostically spines. The ductus bursae rather short and not curved as in *Parasimesia*. No signum. The corpus bursae of one of the examined females contains many star-shaped cornuti.

Material examined: 9 ♂♂, 13 ♀♀ from various places of Kenya: E of Mwingi, W of Enguni; Garissa, S of Bura; E of Mwingi; E of Garsen and W of Witu; W of Enguni, and Sosoma; 202 km E Thika; Kedai in iv., xi and xii. until 600 m above sea level.
**Parasimesia nov.gen.**

**Type species:** *Parasimesia makeda* nov.sp.

**Diagnosis:** Medium sized notodontids. The antennae of both sexes are orange coloured as in *Simesia* and strongly bipectinated. The female has shorter rami than the male. The pectinations extend 5% before the tip of the antennae as in *Simesia*, but the middle part of the antennae from the base until the tip with white scales plated. The ground colour of the forewings shiny whitish, sometimes yellowish tinged.

The blackish pattern, which is sometimes indistinctly developed, includes a postmedian double fascia (marked often by blackish dots on the veins), a circular discal spot and occasionally a quadratic fuscous filled area near the basal area of the costa of the forewings. The hindwing of the males are white with blackish markings in the anal angle. The sexual dimorphic is limited; the females show a fuscous submarginal area of the hindwings or generally fuscous hindwings.

The male genitalia have a large anvil shaped uncus, which separates the genus from *Afroplitis*, which have an ellipsoid shaped, sometimes notched, uncus. A pair of short socii present. The valves are divided and the lower part (sacculus) ends in a pointed process. The phallus short.

The 8th sternite has a pair of prominent, strongly sclerotized central lobes. The 8th tergite less modified, but specifically sclerotized.

The female genitalia have a serrated shaped 8th abdominal segment. The papillae anales are large and strong sclerotized. The ductus bursae slender, and sinous curved. The ellipsoid corpus bursae have a signum on the bottom.

The new genus is most related to *Simesia*. The external appearance of the males is similar in both genera, but the antennae in *Simesia* are bipectinated until the tip. The stronger sexual dimorphism in *Simesia* and in particular structural differences such as undivided valves, long and curved phallus in genitalia, the lacking of the central lobes of the 8th sternite, as well as the absent signum or the not serrated 8th abdominal segments in the females of *Simesia* separate both genera. There is also a resemblance to *Afroplitis* KIRIA-KOFF, 1964, but adults of this genus are much larger in forewing length and the last 10-20% of the antenna are naked. The male genitalia of *Afroplitis* differ, by the shape of the uncus, the presence of a costal process of the undivided valves and the 8th abdominal segments (without processes or lobes).

The genus contain currently two East African (Kenya, Somalia) species.

**Parasimesia makeda** nov.sp.

*(figs. 6-10, 16, 17, 20)*


**Paratypes** *(10 ♂♂, 37 ♀♀):*

2 ♂♂, 1 ♀, Kenya, Garissa, S. of Bura, 26.4.2011, leg. Snižek;
1 ♀, Kenya, Garissa, 10 km S of Hola, 27.iv.2011, leg. Snižek (MWM 22.748);
1 ♂, 1 ♀, Kenya NE, E of Garsen, W of Witu, 28.iv.2011, leg. Snižek (MWM 25.894);
2 ♂♂, 1 ♀, Kenya E., E of Thika, Mwingi loc., 30.iv.2011, leg. Snižek (MWM 22.746);
2 ♂♂, 2 ♀♀, Kenya E, 202 km E. Thika Sosoma, 4.12.2010, leg. Snižek;
All paratypes are in the Museum Witt, Munich.

Diagnosis: Forewing length ♂ 17,5 mm - 18,5 mm, ♀ 21 - 22 mm, a single female (fig. 7) only spans 16 mm. The species is readily to recognize by its shiny white colour of the forewings with contrasting fuscous grey dots along the veins. The antennae of the males are orange as in dasychiroides, but the pectinations (rami) are shorter. Contrary to dasychiroides the central part of the antennae (not the rami) from a dorsal view is whitish coloured. The pale frons divided by a blackish line which continues on the thorax. The hindwing of the males white with finer and contrasting black markings on the anal angle. The submarginal area of the slightly sexual dimorphic female fuscous coloured, fading towards the median area (in dasychiroides having a sharp border). The species displays considerably individual variation in size, and the development of the blackish pattern. A small female from Kenya (fig. 7) displays greyish hindwing and several broad greyish fasciae as well as a large quadratic grey costal area.

The male genitalia are well characterized by the shape of the bilobed robust uncus, where the uncus arms are directed downwards or sidewards. A pair of pointed and short socii are sidewards directed. The valve is divided, where the lower (saccular) part is sharply pointed. The phallus is rather short and thick and bifurcate at the tip; the everted endophallus contains many star shaped cornuti. There is a considerably variability in the male genitalia as illustrated (uncus shape, shape of the valve). The 8th sternite has a pair of large and strong sclerotized central lobes at the posterior margin.

The female genitalia displays a serrated shape of the 8th abdominal segment. The papillae anales are strong sclerotized, large and of rectangular shape. Both pairs of apophyses are rather small. The ductus bursae rather short and S-shaped (not rectangular curved as in the following species). The corpus bursae with smooth surface, bears a signum of specific shape on the bottom.

The new species resembles much to Parasimesia menelik, described below but is separable by the richer developed black pattern of the forewings and the second contrasting black dot of the hindwings (in dasychiroides absent, in menelik weakly developed). The male genitalia are different by the shape of the uncus, the shape of the larger valve and the shape of the phallus. The central lobes of the 8th sternite are larger and different in its shape. The sclerotized parts of the 8th sternite shorter and more rounded; the arms of the anterior margin are thicker. The female genitalia by a rougher serrated 8th abdominal segment, the shorter ductus bursae and the shape of the larger signum.

The species is common in Kenya and occurs sympatrically with Simesia dasychiroides.
Parasimesia menelik nov.sp.  
(figs. 11-13, 18, 21)


Paratypes (5 ♂, 13 ♀):  
1 ♂, Somalia m., Caanoole Fluß, 4.iv.1988, leg. Dr. Politzar (MWM 26.493);  
1 ♂, Somalia m., Caanoole Fluß, 17.iv.1988, leg. Dr. Politzar (MWM 26.972);  
1 ♂, Somalia m., Caanoole Fluß, 17.v.1988, leg. Dr. Politzar;  
2 ♂, Somalia m., Caanoole Fluß, 10.i.1989, leg. Dr. Politzar;  
Paratypes are in Museum Witt, Munich and Zoologische Staatssammlung, Munich.

Diagnosis: Forewing length ♂ 18,5 mm, ♀ 19 - 22 mm. The new species is similar to Parasimesia makeda (see description above). The orange brown coloured antennae are in both sexes bipectinated until the tip; the last 5% of the antennae are naked. The pale frons divided by a blackish line. The whitish forewings are yellowish tinged and display the blackish pattern reduced in comparison to makeda. The fine and sharply marked black discal spot is accompanied towards the margin by a larger, indistinct black blutch. The veins in the postmedian and submarginal area are blackish marked. The hindwings are white with a small blackish marked anal angle; a second black dot, as it occurs in makeda is absent or weakly developed. The female display slightly more fuscous hindwings, fading towards the median area.

The male genitalia are similar to those of makeda. They differ in the shape of the upwards directed uncus arms. The pair of socii are slightly shorter than in makeda. The divided valves are shorter than in makeda and differ slightly in the shape of the curved and pointed saccular process. The phallus is straight, longer and not bifurcate at the tip. The sclerotized parts of the 8th sternite rather rectangular shaped and wider than in makeda; the arms of the anterior margin are longer and more slender. The 8th sternite displays a central pair of longer and prominent processes, which are thinner than in makeda. The anterior margin is serrated in the center. The female genitalia have also a serrated 8th abdominal segment as makeda, but the serrations are finer. The apophyses are small as in makeda. The ventral plate gently curved and smooth, whereas in makeda this plate consists from a pair of bifurcate lobes. The ductus bursae longer and thinner than in makeda and two times rectangularly curved. The corpus bursae displays fine structures, which are not seen in makeda. The signum on the bottom is smaller than in makeda.

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Plate 1: Adults of *Simesia* and *Parasimesia*.

Illustrations are in natural size.

**Fig. 1** *Simesia dasychiroides* (Butler, 1898): ♀, Kenya, Maziwa, Mitatu, 27.iii.1894, C.S. Betton; holotype (BMNH).

**Fig. 2** *Simesia dasychiroides* (Butler, 1898): ♀, Kenya, E 202 km E Thika, Sosoma, 4.xii.2010, leg. Snižek; MWM 25.903 (MWM).

**Fig. 3** *Simesia dasychiroides* (Butler, 1898): ♂, Kenya, Kedai, 25.xi.1911, W. Feather, lectotype of *Stauropus critobulus* Fawcett, 1916; lectotype (BMNH).

**Fig. 4** *Simesia dasychiroides* (Butler, 1898): ♂, Kenya, Kedai, 25.xi.1911, W. Feather, paralectotype of *Stauropus critobulus* Fawcett, 1916; BM404; (BMNH).

**Fig. 5** *Simesia dasychiroides* (Butler, 1898): ♂, Kenya E., E of Mwingi, W. of Enguni, 1.xii.2010, leg. Snižek; MWM 23.397 (MWM).

**Fig. 6** *Parasimesia makeda* nov.sp.: ♂, Kenya, Garissa, S. of Bura, 26.iv.2011, leg. Snižek; MWM 22.745, holotype (MWM).

**Fig. 7** *Parasimesia makeda* nov.sp.: ♀, Kenya, Garissa, 10 km S of Hola, 27.iv.2011, leg. Snižek; MWM 22.748, paratype (MWM).

**Fig. 8** *Parasimesia makeda* nov.sp.: ♀, Kenya E., E of Thika, Mwingi loc., 30.iv.2011, leg. Snižek; MWM 22.746, paratype (MWM).

**Fig. 9** *Parasimesia makeda* nov.sp.: ♂, Kenya NE, E of Garsen, W of Witu, 28.iv.2011, leg. Snižek; MWM 25.894, paratype (MWM).

**Fig. 10** *Parasimesia makeda* nov.sp.: ♀, Kenya, E of Garsen, W of Witu, 28.iv.2011, leg. Snižek, paratype (MWM).

**Fig. 11** *Parasimesia menelik* nov.sp.: ♂, Somalia m., Canoole Fluß, 4.iv.1988, leg. Dr. Politzar; MWM 26.493, holotype (ZSM).

**Fig. 12** *Parasimesia menelik* nov.sp.: ♀, Somalia m., Deshek, Wamu, 26.iv.1989, leg. Dr. Politzar; paratype (ZSM).

**Fig. 13** *Parasimesia menelik* nov.sp.: ♀, Somalia m., Deshek, Wamu, 26.iv.1989, leg. Dr. Politzar; MWM 23.050, paratype (ZSM).
Plate 2: Male genitalia of *Simesia* and *Parasimesia*.

**Fig. 14** *Simesia dasychiroides* (Butler, 1898): ♂, Kenya E., E of Mwingi, W. of Enguni, 1.xii.2010, leg. Snižek; MWM 23.397 (MWM).

**Fig. 15** *Simesia dasychiroides* (Butler, 1898): ♂, Kenya, Kedai, 25.xi.1911, W. Feather, paralectotype of *Stauropus critobulus* Fawcett, 1916; BM404; (BMNH).

**Fig. 16** *Parasimesia makeda* nov.sp.: ♂, Kenya, Garissa, S. of Bura, 26.iv.2011, leg. Snižek; MWM 22.745, holotype (MWM).

**Fig. 17** *Parasimesia makeda* nov.sp.: ♂, Kenya NE, E of Garsen, W of Witu, 28.iv.2011, leg. Snižek; MWM 25.894, paratype (MWM).

**Fig. 18** *Parasimesia menelik* nov.sp.: ♂, Somalia m., Canoole Fluß, 4.iv.1988, leg. Dr. Politzar; MWM 26.493, holotype (ZSM).
Plate 3: Female genitalia of *Simesia* and *Parasimesia*.

**Fig. 19** *Simesia dasychiroides* (Butler, 1898): ♀, Kenya, E 202 km E Thika, Sosoma, 4.xii.2010, leg. Snižek; MWM 25.903 (MWM).

**Fig. 20** *Parasimesia makeda* nov.sp.: ♀, Kenya, Garissa, 10 km S of Hola, 27.iv.2011, leg. Snižek; MWM 22.748, paratype (MWM).

**Fig. 21** *Parasimesia menelik* nov.sp.: ♀, Somalia m., Deshek, Wamu, 26.iv.1989, leg. Dr. Politzar; MWM 23.050, paratype (ZSM).
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