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Taxonomic notes on some Liptenini (Lepidoptera: Lycaenidae: Poritiinae)

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Abstract: The status of five species of Liptenini is revised: *Liptena decempunctata* Schultze, 1923 is transferred to the genus *Tetrarhanis* Karsch, 1893 (**comb. nov.**), and *Tetrarhanis souanke* (Stempffer, 1962) is synonymised with *T. decempunctata* (Schultze, 1923) (**syn. nov.**); *Liptena mwagensis* Dufrane, 1953 is transferred to the genus *Micropentila* Aurivillius, 1895 (**comb. nov.**); *Liptena sauberi* Schultze, 1912 is synonymised with *L. modesta* (Kirby, 1890) (**syn. nov.**), and *Liptena yukadumae* Schultze, 1917 is synonymised with *L. tricolora* (Bethune-Baker, 1915) (**syn. nov.**); the synonymy of *Pentila occidentalis* Bethune-Baker, 1926 with *Kakumia ferruginea* (Schultze, 1923) is confirmed.

Key words: Lepidoptera, Lycaenidae, Poritiinae, Liptenini, taxonomy, synonymy, Africa, Afrotropical region.

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INTRODUCTION

During the study of some groups of Liptenini genus *Liptena* (Libert, 2018, 2020, Libert & Collins, 2018), several new species were described. It has become necessary to ascertain whether any of these new species were identical to one or the other of the few *Liptena* species whose identification remains problematic. Investigations that were carried out on five taxa of disputed status show that two taxa must be transferred into genera different from those in which they were described, and that three synonymies must be recognised.

TAXONOMIC CHANGES

Tetrarhanis decempunctata (Schultze, 1923), **comb. nov.**

Liptena decempunctata Schultze, 1923. In Schultze & Aurivillius, 1923. *Ergebnisse der Zweiten Deutschen Zentral-Afrika Expedition 1910–1911* **1 (17)**: 1187.
Liptena decempunctata Schultze, 1923 *s.* Stempffer (1967: 54[1]), Ackery *et al.* (1995: 506), d'Abrera (2009: 652), Williams (2019).
= *Tetrarhanis souanke* (Stempffer, 1962), **syn. nov**.

The description of *Liptena decempunctata* was based on a male and a female collected in south-eastern Cameroon (Moloundou and Boënga). These specimens were deposited in the Hamburg museum and were unfortunately destroyed by the bombing of the city during the Second World War. In his description, Schultze compared *decempunctata* to *Liptena nubifera* Druce, 1910, which has subsequently been moved to the genus *Tetrarhanis* Karsch, 1893. The description included a hand-drawing by Schultze, which showed that the underside of the female of *decempunctata* has all the characters of the genus *Tetrarhanis*. More precisely, it is very similar to that of *T. souanke* (Stempffer, 1962), which Stempffer placed in the group of *T. nubifera*, and whose type-locality is Sembé (district of Souanké), in the north of the Congo, about one hundred kilometers south-west of Moloundou.

It is therefore determined that *souanke* is a synonym of *decempunctata* (**syn. nov**.), but the latter must obviously be placed in the genus *Tetrarhanis*, and in accordance with article 31.2.1 of the Code of Nomenclature, it becomes *Tetrarhanis decempunctata* (Schultze, 1923) (**comb. nov.**). The male holotype of *Tetrarhanis souanke* is chosen as the neotype of *T. decempunctata*:

Neotype: ♂ Sembé, district de Souanké, Congo, II.1960 (*T. H. E. Jackson*) ; Natural History Museum, London.

Micropentila mwagensis (Dufrane, 1953), **comb. nov.** (Fig. 1)

Liptena mwagensis Dufrane, 1953. – Lépidoptères du Kivu (5[e] note). *Bulletin et Annales de la Société entomologique de Belgique*, **89** (I-II) : 49.
Liptena mwagensis Dufrane, 1953 *s.* Stempffer (1967: 54), Ackery *et al.* (1995: 508), d'Abrera (2009: 652), Williams (2019).

The description of *Liptena mwagensis* was based on a single female collected on the Mwago Plateau (8 km south of Mwega), in eastern Democratic Republic of Congo[2] (hereafter referred to as DRC).

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[1] According to d'Abrera (2009: 652), Stempffer (1957: 65) 'claims that this taxon is closely related to *Tetrarhanis nubifera* Druce', which it has not been possible to verify; in his description of *T. souanke*, Stempffer does not mention *decempunctata*.

[2] However, Berger (1981) does not mention *mwagensis*.

Dufrane (1953) placed *mwagensis* near *Liptena modesta* (Kirby, 1890), whilst acknowledging that it "bears little resemblance to it". The description, especially the shape of the spot on the hindwing upperside, suggests that *mwagensis* probably belongs to the genus *Micropentila* Aurivillius, 1895. Stefan Kerkhof found the type of *Liptena mwagensis* among specimens of the genus *Micropentila* in the collection of the Royal Belgian Institute of Natural Sciences (Brussels), and the pictures that he kindly sent confirm that *mwagensis* actually belongs to this genus (Fig. 1).

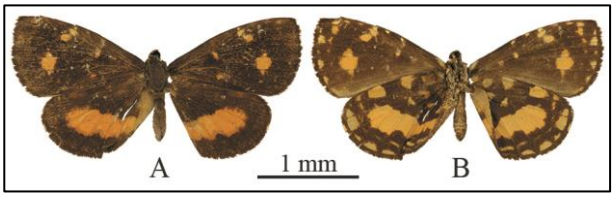

Figure 1 – *Liptena mwagensis* Dufrane: Holotype ♀ A: recto; B: verso.

The (female) type of (*Liptena*) *mwagensis* is not very different from the female allotype of *Micropentila fontainei* Stempffer & Bennett, 1965, collected in the type-locality (Katako-Kombe, central DRC), and a long series of *M. fontainei* from NE DRC in the collection of Robert Ducarme shows that the variability of this species is important. It is therefore probable that *fontainei* is a synonym of *mwagensis*, but it is preferable to examine the genitalia to make sure that the two species do not fly in north east DRC before establishing the synonymy. Both taxa are also very similar to *M. galenides* (Holland, 1895), another valid species[3] despite the doubts of Ackery *et al.* (1995: 516), of which *M. mwagensis*, or perhaps *M. fontainei*, could be the eastern vicariant.

Liptena modesta (Kirby, 1890)

Teriomima modesta Kirby, 1890. Descriptions of new West African Lycaenidae. *Annals and Magazine of Natural History*, **6** (6): 270.
Liptena modesta (Kirby, 1890) *s.* Stempffer (1967: 55), Ackery *et al.* (1995: 507), d'Abrera (2009: 651), Williams (2019).
= *Liptena sauberi* Schultze, 1912, **syn. nov.**
Liptena sauberi Schultze, 1912 *s.* Stempffer (1967: 54), Ackery *et al.*, (1995: 509), for whom *sauberi* could however be a synonym of *modesta* Kirby, d'Abrera (2009: 650), Williams (2019).

The type of *Liptena modesta* is a male from the Staudinger collection collected by Preuss, i.e. in western Cameroon (Museum für Naturkunde, Berlin). Larsen (2005: 149) suggests that *modesta* is probably a subspecies of *Liptena helena* (Druce, 1888); this approach is adopted by Libert & Collins (2018: 119), but DNA barcoding shows unambiguously that the two taxa are actually distinct species (unpublished results).

The description of *Liptena sauberi* is based on a male and a female collected in south-eastern Cameroon (Yokaduma and Dalugere); these specimens were also deposited in the Hamburg museum and were unfortunately destroyed by the bombing of the city during the Second World War. They are not illustrated in the description, but a male and a female of *Liptena sauberi* are represented in Schultze & Aurivillius [1923, plate XLIX, fig. 6a (♂) and 6b (♀)], and it can be assumed that Schultze's specimens were used for the illustrations[4].

The female does not differ in any way from several females of *L. modesta* (Kirby, 1890) from Cameroon in the author's collection, but the male is curious... if it is really a male. Indeed, the specimen looks more like a female, also of *L. modesta*, but with a more or less aberrant upper side (especially the deeply indented outer edge of the hindwing orange band, but also the forewing orange band extending more towards the outer edge of the wing).

If this specimen were really a male, it could not be related to any described *Liptena* species, and would consequently represent a distinct, new, species. This both underlines the necessity to designate one of the two syntypes as a lectotype and shows that it would not be wise to select the male. The female is therefore selected, and it follows that *sauberi* is a synonym of *modesta* (**syn. nov.**).

Liptena tricolora (Bethune-Baker, 1915)

Pentila tricolora Bethune-Baker, 1915. Descriptions of new species of Lepidoptera from Africa and the East. *Annals and Magazine of Natural History*, **8 (16)**: 188.
Liptena tricolora (Bethune-Baker, 1915) *s.* Stempffer (1967: 55), Ackery *et al.* (1995: 510), d'Abrera (2009: 650), Williams (2019).
= *Liptena yukadumae* Schultze, 1917, **syn. nov.**
Liptena yukadumae Schultze, 1917 *s.* Stempffer (1967: 56), Williams (2019);
Liptena yakadumae Schultze, 1917 *s.* Ackery *et al.* (1995: 510), d'Abrera (2009: 652).

The description of *Liptena yukadumae* was based on a single male collected near Yokaduma, in south-eastern Cameroon; this male was also deposited in the Hamburg museum and was unfortunately destroyed by the bombing of the city during the Second World War. It is not illustrated in the original description, but it is represented in Schultze & Aurivillius [1923, plate XLIX, fig. 5], which shows that its underside, especially on the hindwings, is hardly different from that of the type female of *Liptena tricolora* (Bethune-Baker, 1915), which is depicted by d'Abrera (2009: 651).

It is therefore most likely that the male of *L. tricolora*, which has not yet been observed, is none other than the male described as *L. yukadumae*, and that *yukadumae* is a synonym of *tricolora* (**syn. nov.**).

[3] Type-locality = Bule Country, in southern Cameroon; the type (in the Carnegie Museum of Natural History, Pittsburgh) is labelled '*Teriomima galenoides*'; according to the description, it is a male, but the shape is rather that of a female.

[4] Seitz (1923, pl. 65c) also illustrates the upperside of the two specimens, and its drawings differ from those of the plate by Schultze and Aurivillius by the presence of small white spots in the black margin of the hindwings (one row in the male, two in the female); one can reasonably assume that the illustration of Schultze, who described *sauberi*, is more reliable than that of Seitz. These additional spots may have prompted treating *sauberi* as a taxon different from *modesta*.

The type locality of *L. tricolora* is Bitje, about 300 km west of Yokaduma, but three other females were recently collected in Bakassi, in western Cameroon, near the border with Nigeria (collection African Butterfly Research Institute, Nairobi). More unexpectedly, Claudio Belcastro also captured two females in Guinea and Sierra Leone (pers. comm.).

Kakumia ferruginea (Schultze, 1923)

Liptena ferruginea Schultze, 1923. In Schultze & Aurivillius, 1923. *Ergebnisse der Zweiten Deutschen Zentral-Afrika Expedition 1910-1911*. **1 (17)**: 1184.
Liptena ferruginea Schultze, 1923 *s.* Stempffer (1967: 54); Ackery *et al.* (1995: 506);
Kakumia ferruginea (Schultze, 1923), Collins & Larsen, 1998: 67, comb. nov.;
Kakumia ferruginea ferruginea (Schultze, 1923) *s.* d'Abrera (2009: 652);
Kakumia ferruginea (Schultze, 1923) *s.* Collins *et al*. (2013: 51), Williams (2019);
= *Pentila occidentalis* Bethune-Baker, 1926 (d'Abrera, 2009: 652);
Liptena occidentalis (Bethune-Baker, 1926) *s.* Stempffer (1967: 55), Ackery *et al.*, who comment 'of uncertain status, possibly synonymous with *L. ferruginea* Schultze, 1923' (1995: 508), Williams (2019).
nec Kakumia ferruginea rubromacula (Hawker-Smith, 1933) *s.* d'Abrera (2009: 652);
nec Kakumia ferruginea jacksoni (Carpenter, 1934) *s.* d'Abrera (2009: 652).

The description of *Pentila occidentalis* was based on a female, probably unique, collected by Bates in Bitje, Cameroon. This description corresponds fairly well to the drawing by Schultze that illustrates the underside of the female holotype of *Liptena ferruginea* in the description of this species. It also agrees with the illustrations of the female of *Kakumia ferruginea* in Collins & Larsen, 1998 (pl. 1, B) and Collins *et al*., 2013 (fig. 31, 32).

It is therefore very likely that d'Abrera was correct, and that *occidentalis* is a synonym of *ferruginea*. However, it remains incorrect to distinguish two subspecies of *K. ferruginea* as d'Abrera does, and *rubromacula* Hawker-Smith, 1933 is a valid species of the genus *Liptena* (Collins *et al*., 2013: 51).

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