

***Euploea rogeri* (Lepidoptera: Danainae), a little known Seychelles butterfly**

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Introduction

The butterfly genus *Euploea* Fabricius is a largely Indo-Australian genus represented by two extant species in the Afrotropical region (Ackery & Vane-Wright 1984). *Euploea euphon* (Fabricius) is found on the Mascarene Islands where it is represented by three distinct subspecies (Ackery *et al.* 1995). *E. euphon euphon* (Fabricius) occurs on Mauritius (Manders 1907; Williams 2007), *E. euphon goudotii* (Boisduval) on Reunion (Martire & Rochet 2008), and *E. euphon desjardinsii* (Guerin-Meneville) on Rodrigues (Vinson 1938), although the latter subspecies may be now extinct (Ackery *et al.* 1995). The other *Euploea* species, *Euploea mitra* Moore is confined to the granitic Seychelles islands of Mahe and Silhouette (Lawrence 2000; Gerlach & Matyot 2006). A record of *E. mitra* from Aldabra by Holland (1896) is believed to be an error (Fletcher 1912; Legrand 1965).

A further taxon, *Euploea rogeri* Geyer has been associated with Seychelles. Although the type specimen is lost (Legrand, 1965), it was apparently described from a specimen of unknown origin dating from around 1820 (Gerlach & Matyot 2006). This taxon is known only from two paintings in Hubner (1837) (Fig. 1). Legrand (1965) suggested that *rogeri* is synonymous with *mitra*. Furthermore, Aurivillius (1925) states that *E. rogeri* “somewhat recalls the female of *E. mitra*”. If *rogeri* is synonymous with *mitra*, then the name *rogeri* would take preference over *mitra*. The given locality is thought to be Seychelles, and for this reason alone, this taxon is often associated with *E. mitra* (Aurivillius 1925; Peter 1952). Ackery & Vane-Wright (1984) suggest that *rogeri* is more reminiscent of a nymphaline, and had it not been placed in *Crastia* (synonym of *Euploea*) it is doubtful that this taxon would ever have been associated with the Danainae. Talbot (1943) indicated that *rogeri* more closely resembles the Mauritius *E. euphon euphon*.

Clearly, there appears to be much confusion about the status of this taxon, including its higher classification. Using basic comparative morphological, along with wing pattern characteristics of the *E. rogeri* illustration and various Malagasy *Euploea* species and subspecies, this brief study aims to determine how similar *E. rogeri* is to the other Afrotropical *Euploea* taxa.

Methods and results

The ratio of forewing length (to the nearest 0.5mm) to the hindwing length (to the nearest 0.5mm) was compared between *E. rogeri*, *E. mitra*, *E. euphon euphon*, *E. euphon goudotii*, and *E. euphon desjardinsii*. As no specimens were available to

the author, and *E. rogeri* is only known from two paintings, wing measurements were made from the illustrations in Boisduval (1833)¹, Hubner (1837)², Aurivillius (1925)³, Legrand (1965)⁴, D’Abrera (1980)⁵, Ackery & Vane-Wright (1984)⁶, Desegaulx de Nolet (1984)⁷, Bowler (2006)⁸, Williams (2007)⁹, and Martire & Rochat (2008)¹⁰. A total of 29 Afrotropical *Euploea* illustrations were examined. The superscript indicates the applicable references in Table 1. A wing ratio was used as the size of each illustration examined varied.

Table 1 lists the species/subspecies, sample size, distribution, mean forewing/hindwing ratio and the reference to the illustrations used. Clearly, the forewing/hindwing ratio of *E. rogeri* is similar to the three *E. euphon* subspecies. The mean forewing/hindwing ratio of the three Mascarene subspecies combined is 1.32 which is similar to the forewing/hindwing ratio of 1.31 for *E. rogeri*. *E. mitra* and *E. rogeri* have quite dissimilar forewing/hindwing ratios.

Table 1. Afrotropical *Euploea* species/subspecies (Taxon), sample size (n), distribution, mean forewing/hindwing ratio (Ratio) and reference to the illustration used.

Taxon	N	Distribution	Ratio	References
<i>E. rogeri</i>	2	Seychelles	1.31	2
<i>E. mitra</i>	9	Seychelles	1.40	3, 4, 5, 6, 8
<i>E. euphon euphon</i>	7	Mauritius	1.32	1, 3, 5, 6, 7, 9
<i>E. euphon goudotti</i>	7	Reunion	1.33	1, 3, 5, 6, 7, 10
<i>E. euphon. desjardinsii</i>	4	Rodrigues	1.31	3, 5, 6

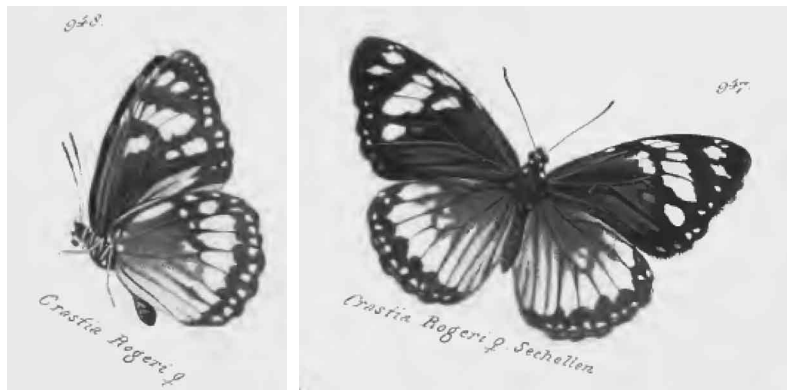


Fig. 1. Female *Euploea rogeri* Geyer, 1837 upperside (left) and underside (right) (originally named *Crasia rogeri*). (Hubner 1837)

Discussion

Initial examination of the *E. rogeri* paintings (Fig. 1) gives the impression that the taxon is not an *Euploea* species at all, and is more similar to a Nymphaline species (following Ackery & Vane-Wright 1984). However, on closer examination *E. rogeri* does share similar characteristics with other Afrotropical *Euploea* species and subspecies. The forewing pattern of *E. rogeri* is similar to that of *E. mitra*. However, the white cells are quite a bit smaller on *E. rogeri* than *E. mitra*. Conversely, the hindwing pattern of *E. rogeri* is quite different to that of *E. mitra*, but superficially similar to *E. euphon euphon* from Mauritius (following Talbot 1943).

More light may be shed on this confusing situation when the forewing/hindwing ratio's are examined. The forewing lengths of *E. mitra* and *E. rogeri* are 40% and 31% respectively longer than their hindwings. This indicates that *E. rogeri* is unlikely to be an aberration of *E. mitra* as has been suggested (Legrand 1965; D'Abrera 1980), even though the forewing patterns are vaguely similar.

The forewing/hindwing ratios of *E. rogeri* and *E. euphon* are very similar. Maybe, *E. rogeri* could be considered a Seychelles subspecies of *E. euphon* that is now extinct. The three known subspecies of *E. euphon* all display varying degrees of white patterning on both their forewings and hindwings, but all are very similar in their forewing/hindwing ratios.

However, care should be taken with the scenario presented here. This study is based on small sample sizes and on measurements taken from illustrations. Although in the case of *E. rogeri* no specimens actually exist. Possibly, measurements taken from actual *E. mitra* and *E. euphon* specimens would give different results. Also, the accuracy of the *E. rogeri* paintings are not known, but are assumed to be accurate.

To summarise, there are five possible views on the status of *E. rogeri*. Firstly, it could be an aberration of *E. mitra* (Legrand 1965). Secondly, it may represent a distinct *Euploea* species (i.e. *E. rogeri*) (Hubner 1837), now extinct. Thirdly, it could represent an extinct Nymphaline species and is not an *Euploea* species (Ackery & Vane-Wright 1984). Fourthly, *E. rogeri* could be an extinct subspecies of some other Indo-Australian *Euploea* species. *E. rogeri* shows a superficial resemblance to various subspecies of *Euploea sylvestern* (Fabricius), *Euploea core* (Cramer), *Euploea algae* (Godart) and *Euploea climena* (Stoll). Finally, *E. rogeri* could be an extinct Seychelles subspecies of *E. euphon* as suggested here. The view presented here agrees with the observation of Talbot (1943) in that *E. rogeri* approaches *E. euphon euphon* in appearance. Unfortunately, without the actual *E. rogeri* specimen the truth may never be known.

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