

THE TRUE IDENTITY OF '*DELIAS SACHA GILOLENSIS*' ROTHSCHILD, 1925 (LEPIDOPTERA, PIERIDAE)

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Abstract- *Delias sacha gilolensis* Rothschild, 1925 is found to be a synonym of *Delias poecilea poecilea* Vollenhoven, 1865. *Delias sacha* Grose Smith, 1895, is therefore endemic to Obi.

Keywords: Lepidoptera, Pieridae, *Delias*, *sacha*, *gilolensis*, *poecilea*, *candida*, Indonesia, Halmahera, Obi.

INTRODUCTION

Delias sacha was described by Grose Smith in 1895 from two male specimens captured on Obi island in North Maluku, Indonesia. In 1925 Walter Rothschild described a second race, *D. sacha gilolensis*, based on single specimens of both sexes obtained by H. Waterstradt from Halmahera. The nearest part of this island is approximately 80km north of Obi. As far as we can establish, the types are the only known examples of the 'subspecies'.

Since publication of Grose Smith's and Rothschild's descriptions, the female of nominate *D. sacha* has been discovered on Obi. It bears little resemblance to the supposed female of subspecies *gilolensis* from Halmahera. Intrigued by the uncertain status of the taxon, we have examined the type specimens held in the Natural History Museum, London (BMNH) and compared them with examples of allied species and the original descriptions. We find that Rothschild mistakenly described *D. sacha gilolensis* based on a male specimen of *Delias poecilea poecilea* Vollenhoven, 1865, and a female of *Delias candida herodias* Vollenhoven, 1865.

ORIGINAL DESCRIPTION OF *DELIAS SACHA* *GILOLENSIS*

Quoted from Rothschild's 1925 paper:

'Delias sacha gilolensis, subsp. n.

♂. Above differs on fore wing from *s. sacha* in the much larger coalescent subapical spots almost obliterating the black apex, and on the hind wing in the absence of the broad black margin, it being only indicated by slightly thinner white scaling than on the disc.

Below it differs in the hind wing being on the disc, instead of entirely clear yellow with orange suffusion in tornal region, pale lemon-yellow on basal three-fifths with a broad outer white patch between veins 3 and 7 and a larger deep orange patch running in from tornus to basal one-fifth of wing; the black outer area is much broader and the lunate submarginal spots are much reduced, very narrow, and brilliant scarlet, not orange as in *s. sacha*.

♀. The female of *s. sacha* is unknown, so I cannot give a comparative description of that sex of *gilolensis*.

Above sooty-black, basal half more or less suffused with whitish scaling, on the fore wings a row of six white subapical spots and on the hind wings five white quadrate marginal spots.

Below basal half obliquely of fore wing whitish grey, basal quarter and median nervure greenish yellow, rest brownish black; an apical- submarginal row of seven spots, the first two sulphur-yellow, the rest white; hind wing basal one-third greenish yellow, outer two-thirds brownish black, a row of six large wedge-shaped orange submarginal patches.

Hab. 1 ♂, 1 ♀, Halmahera (*Waterstradt coll.*). (♂ type.)

Types

The holotype (Fig. 1) has a wingspan of 55mm, somewhat smaller than the typical 64-68mm of male *D. poecilea*, however it possesses the following characteristics that distinguish this species from the male of *D. sacha* (Fig. 3):

The upperside fore wing white apical spots are more extensive and conjoined. On the upperside hind wing there is a narrow black marginal band shading to grey at inner edge which is divided by white marginal spots. The underside hind wing has a white patch between veins 3 and 7, is indented along the inner edge of the black marginal band, and the submarginal spots are scarlet red rather than deep orange in *sacha*. Importantly, the inner edge of these spots are convex, a diagnostic feature of the *hyparete* group of *Delias* as defined by Talbot (1937), to which *D. poecilea* belongs. In *Delias sacha* and other members of the *isse* group, including *D. candida* Vollenhoven, 1865, these spots are chevron shaped with an indented (concave) inner edge.

We therefore consider that the *gilolensis* holotype is a small specimen of *D. p. poecilea*, rather than a subspecies of *D. sacha*.

Nominate *D. poecilea* (Fig. 5) is found on Halmahera and the adjacent islands of Bacan, Kasiruta and Mandioli. *D. poecilea makikoe* Yagishita, 1993 occurs on Morotai. The species is closely related to the Obi endemic *D. edela*, Fruhstorfer, 1910 (Figs. 7 & 8), originally described as a subspecies of *D. poecilea*.

The female paratype of *gilolensis* (Fig. 2) is clearly unrelated to the female of *D. sacha* (Fig. 4) and is considered to be a slightly atypical female of *Delias candida herodias* (Fig. 6). It differs from typical females of this taxon in the absence of a small white discocellular spot on the underside of the hind wing, a characteristic that is known to be variable. *Delias candida* Vollenhoven, 1865 is a relatively common *Delias* from North Maluku with the subspecies *herodias* occurring on Halmahera.

Labels attached to the *gilolensis* holotype (Fig. 1) include a note, apparently in the handwriting of G. Talbot, stating "*D. sacha gilolensis* Type Rothschild."



Fig. 1. *D. sacha gilolensis* HT male (Halmahera)



Fig. 2. *D. sacha gilolensis* PT female (Halmahera)



Fig. 3. *D. sacha* male (Obi)



Fig. 4. *D. sacha* female (Obi)

Both *gilolensis* holotype and paratype (Figs. 1 & 2) have handwritten labels stating “det. R. I. Vane-Wright 1970” with “Holotype” on the male and “Paratype” on the female. Richard (Dick) Vane-Wright was in charge of the BMNH Rhopalocera collections from 1967-1984.

DISCUSSION

It is curious that Rothschild, in his publication of 1925, did not compare *gilolensis* with *D. poecilea* or *D. candida*, both of which were described in 1865 and represented in his own collection.

Rothschild also possessed the two male syntypes of *D. sacha sacha*, although the female was unknown during his lifetime.

Talbot (1937) includes the subspecies in his monograph, quoting the description without further comment or comparison with allied species, a surprising omission when he had evidently inspected the types.

Yagishita, Nakano & Morita (1993) include *D. sacha gilolensis* in their list of recognised taxa, noting its occurrence on Halmahera without illustrating the taxon. A. Yagishita (pers. comm. to second author) has indicated that the type material was not available for study by his co-author at the time of publication.

Peggie, Vane-Wright & Yata (1995) also list *D. sacha gilolensis* in their checklist of pierid butterflies of North and Central Maluku and state the range as Halmahera and Morotai.

This unique record from Morotai is not substantiated in the text and has not been confirmed by any other sources (including Vane-Wright, pers. comm.). They illustrate a female ‘*Delias sacha gilolensis*’ that is clearly the female paratype (Fig. 4), now assigned to *D. candida herodias*.

D’Abrera (1990) lists *D. sacha gilolensis* in the text, noting its range as Halmahera, but does not illustrate the taxon. His comments about the appearance apply only to the male specimen.

CONCLUSION

We find that the taxon *Delias sacha gilolensis* Rothschild, 1925, as represented by the holotype male, is synonymous with *D. poecilea poecilea* Vollenhoven, 1865. The female paratype of *gilolensis* is a specimen of *D. candida herodias* Vollenhoven, 1865.

Delias sacha is therefore confirmed to be endemic to Obi, as is *Delias edela*.

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Fig. 5. *D. poecilea poecilea* male (Halmahera)Fig. 6. *D. candida herodias* female (Halmahera)Fig. 7. *D. edela* male (Obi)Fig. 8. *D. edela* female (Obi)

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