

## Description of the female of *Delias laknekei* Miller, Simon & Wills, 2007 (Lepidoptera: Pieridae, Pierinae)

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Suara Serangga Papua (Sugapa Digital) 14(2): 81-83.  
urn:isid:zoobank.org:pub: C7B5A932-C926-4E13-837C-B28A9A884CDF

**Abstract:** Fifteen years after the discovery of *Delias laknekei*, hitherto known from male specimens only, the first females of *Delias laknekei* have been found and are described in this article.

**Rangkuman:** Lima belas tahun setelah penemuan *Delias laknekei*, hitherto yang diketahui hanya specimen jantannya, specimen betina *Delias laknekei* sudah ditemukan untuk pertama kalinya dan dideskripsi pada artikel ini.

**Keywords:** *Delias laknekei*, *Delias lytaea*, Isse group, New Ireland

### Introduction

*Delias laknekei* Miller, Simon & Wills, 2007, is a recently discovered species from the mountains of New Ireland (PNG). So far only a small number of males had been caught. It is not unusual for *Delias* females to be difficult to find as they rarely come down to the ground and wait for the males in the canopy. Several other species of *Delias* have females unknown to science (i.e. *Delias maaikeae* Davenport, Pequin & De Vries, 2017; *Delias cumanau* Van Mastrigt, 2006, a.o.). During a recent expedition in the central mountains of New Ireland, the female of *Delias laknekei* has been discovered.

### Systematic part

#### *Delias laknekei* Miller, Simon & Wills, 2007

##### Description of female

The female of *Delias laknekei* is compared with the female of *Delias lytaea* Godman & Salvin 1878, a sister species found on the nearby island of New Britain.

Forewing upper side is close to *lytaea* female, upperside with broad black margins and three significant differences:

- a chalky yellow suffusion on *laknekei* replaces the white on *lytaea*.
- *laknekei* has no subapical spots.
- the cell has a greater suffusion of black scales.

Hindwing upperside has a slightly thinner and more curved black marginal band than on *lytaea* and the chalky white colour is replaced by a creamy yellow suffusion.

Forewing underside is very similar to *D. lytaea* but can be distinguished by a well-marked yellow scale suffusion in the white basal area of the wing.

Hindwing underside is clearly distinguished by the following characteristics:

- the white basal area of *lytaea* is completely replaced by a vivid yellow on *laknekei*.
- the black margin of *laknekei* is narrower than *lytaea*.
- the inner edge of the the black margin is curved on *laknekei* and straight on *lytaea*.

In conclusion, the extended yellow colouration and narrower and more curved hindwing margins clearly differentiate the 2 species.

### Discussion

The significant morphological differences between the females of the two species tend to confirm their specific separation. Further analysis of their genome may provide a better understanding of whether *laknekei* is a sister species or a subspecies of *lytaea*.

The distribution of *laknekei* still needs to be better understood but they could be parapatric to *lytaea*.

### Material examined

5 ♀♀, Papua New Guinea, Mount Diamond, South of Namatanai, New Ireland, vii.2021, coll. Olivier Pequin.

### Acknowledgement

I am deeply grateful to Laurie Wills for his knowledge of New Ireland which made it possible to collect these specimens.

I also thank Lee Miller, Mark Simon and Laurie Wills, him again, for their description of the male of *laknekei* in 2007 which launched this search for this unknown female.

Finally I am deeply grateful to Chris Davenport for his precious help in writing this article and to Rob de Vos for its publication.

### Relevant literature

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Papua Insects Foundation – *Pierinae*: <http://www.papua-insects.nl/insect%20orders/Lepidoptera/Pieridae/Pieridae%20list.htm>



1



2



3a

3b



4a

4b



5a

5b

1. *Delias laknekei* ♀ *recto* Mt Diamond, S of Namatanai, New Ireland
2. *Delias laknekei* ♀ *verso* Mt Diamond, S of Namatani, New Ireland
3. *Delias laknekei* ♂ New Ireland 3a *recto*, 3b *verso*
4. *Delias lytaea* ♂ New Britain 4a *recto*, 4b *verso*
5. *Delias lytaea* ♀ New Britain 5a *recto*, 5b *verso*