A new subspecies of Delias dice Snellen van Vollenhoven, 1863 from Yapen Island
(Lepidoptera: Pieridae, Pierinae)

Olivier Pequin

Dinard, France
email: opequin@ymail.com

Abstract: A new subspecies of Delias dice Snellen van Vollenhoven, 1863, D. dice burki ssp. nov., is described from Yapen island, Papua, Indonesia.

Rankuman: Subspecies baru dari Delias dice Snellen van Vollenhoven, 1863, D. dice burki ssp. nov., dideskripsi dari Pulau Yapen Papua, Indonesia. [translation by Daawia Suhartawan]

Keywords: Delias, Pieridae, Yapen, Papua, Indonesia

Introduction
Delias dice Snellen van Vollenhoven, 1863, is a well-known Delias species from New Guinea and nearby islands. Several subspecies have been described in the early 20th century from various areas of New Guinea.
Six subspecies are nowadays recognized:
- D. dice dice van Vollenhoven, 1863 from the Vogelkop (Birdshead Peninsula) & west of New Guinea,
- D. dice mitisana Strand, 1916 from Waigeu island,
- D. dice latimarginata Joicey & Talbot, 1925 from the Weyland Mountains and northern lowlands,
- D. dice fulvoflava Rothschild, 1915 from the Snow Mountains and southern lowlands,
- D. dice samarai Joicey & Talbot, 1916 from Eastern Papua New Guinea,
- D. dice rectifascia Talbot, 1928 from Rossel island.
Yapen (also known as “Japen” or “Jobi”) is a 2,278 km² island in the Cenderawasih Bay, Papua Province, Indonesia, off the North-West coast of New Guinea. It is a mountainous island (summit 1,496 m) covered with forests. In common with its neighbouring island of Biak, Yapen island is noted for a high endemism, having several endemic Delias species and subspecies. Examination of specimens of both sexes of Delias dice from Yapen island and comparison with examples from various locations in New Guinea revealed a number of consistent differences in the phenotypes, that, in combination with the geographical isolation of the Yapen population, support description of a new subspecific taxon.

Materials and methods
Wing region and venation terminology follows the numerical system illustrated by Parsons (1999, p. 111, fig. 24).

Abbreviations
ANIC – Australian National Insects Collection (CSIRO), Canberra, Australia
AY – private collection of Akira Yagishita, Tokyo, Japan
BT – private collection of Bernard Turlin, Andrésy, France
CD – private collection of Chris Davenport, Inverness, UK
DB – private collection of Danny Burk, South Bend, Indiana, USA

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MZB – Museum Zoologicum Bogoriense, Bogor, Java, Indonesia
RMNH – Collection of Naturalis Biodiversity Center, Leiden, The Netherlands (former Rijksmuseum voor Natuurlijke Historie)
OP – private collection of Olivier Pequin, Dinard, France

Systematical part

**Delias dice burki ssp. nov.** (Figs 1-2)
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**Holotype**: to deposit in MZB: ♂, Indonesia, Papua, Yapen island, xii.2007, temporary in OP.
**Paratypes**: 7 ♂♂, 2 ♀♀, (OP: 2 ♂♂; DB: 1 ♂, 1 ♀; BT: 2 ♂♂; CD: 2 ♂♂, 1 ♀), same as holotype.

**Diagnosis**: Eight species of *Delias* are known from Yapen island. All are locally endemic subspecies and share the character of having increased black hindwing markings. Subspecies *burki* is distinguished from other subspecies of *D. dice* by the greater width of the dark brown underside hindwing margin, which is larger than in any other subspecies. The internal edge of this black margin has a nearly straight shape but is clearly rounded in other subspecies.

**Description**: ♂ forewing base length: 24 mm. Upperside of hindwing is white with a wider brown margin (about 3 mm) than in other subspecies, which continues above the radial sector. Underside of hindwing has a very wide dark brown anal margin (about 7 mm vs 3-5 mm in other subspecies). The internal edge of this black margin is nearly straight shaped in contrast to the clearly rounded shape in other subspecies. Forewings are similar to other subspecies.

♀ forewing base length: 24 mm. Upperside of hindwings is half black from termen to median and half white from median to base with a soft yellow suffusion from the discal cell to Sc+R1. The separation between these two zones is a black scale suffusion. Underside of hindwings has a strong yellow suffusion from the base to the median zone, and a very large and incurved black margin with 6 well-marked yellow spots. Females of *Delias dice* are highly variable, but those of the new subspecies have a stronger yellow suffusion and a wider incurved black hindwing margin than in other subspecies. Forewings of the females from Yapen are close to the dark forms of other subspecies but with a larger area of yellow suffusion which covers the full discal cell on the underside.

**Distribution**: The subspecies is endemic to Yapen island, Papua, Indonesia.

**Etymology**: The subspecies is named in honour of my friend Danny Burk, an American entomologist who devoted a large part of his life to the study and collection of the *Delias* genus and who kindly provided material for study.

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