

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

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

Rankuman: Subspesies 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

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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References

- Parsons, M.J., 1998. The butterflies of Papua New Guinea: their systematics and biology. Academic Press, London: 736 pp. + 104 pls.
- Talbot, G., 1928-1937. A Monograph of the Pierine Genus *Delias*. British Museum, London Parts 1-5: 1-259.
- Yagishita, A., S. Nakano & S. Morita, 1993. An illustrated list of the genus *Delias* Hubner of the World. 2 volumes, Khepera, Tokyo: xiv: 384, 409, vi.



Figs 1-6. Subspecies of *Deliastix dice* Snellen van Vollenhoven, 1863. **1.** *Deliastix dice burki* **ssp. nov.**, holotype ♂, Yapen Island, Papua, Indonesia, coll. OP (MZB); **2.** *D. dice burki* **ssp. nov.**, paratype ♀, Yapen Island, Papua, Indonesia, coll. CD; **3.** *D. dice latimarginata* Joicey & Talbot, 1925, ♂, Weyland Mts, Papua, Indonesia, coll. AY; **4.** *D. dice latimarginata* Joicey & Talbot, 1925, ♀, Nabire, Papua, Indonesia, coll. CD; **5.** *D. dice dice* Snellen van Vollenhoven, 1863, ♂, Etna Bay, West Papua, Indonesia, coll. RMNH; **6.** *D. dice dice* Snellen van Vollenhoven, 1863, ♀, Avona, Etna Bay, West Papua, Indonesia, coll. CD.



Figs 7-10. Subspecies of *Delias dice* Snellen van Vollenhoven, 1863. **7.** *Delias dice fulvoflava* Rothschild, 1915, ♂, Arguni, Papua, Indonesia, coll. DB; **8.** *D. dice fulvoflava* Rothschild, 1915, ♀, Arguni, Papua, Indonesia, coll. DB; **9.** *Delias dice samarai* Joicey & Talbot, 1916, ♂, Kokoda Trail, Papua New Guinea, coll. ANIC; **10.** *D. Dice samarai* Joicey & Talbot, 1916, ♀, Kokoda Trail, Papua New Guinea, coll. ANIC.