

Some notes on *Delias albertisi* (Oberthür, 1880) (Lepidoptera: Pieridae)

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Suara Serangga Papua: 7(2): 28 - 36

Abstract: The original description of *Delias albertisi discoides* Talbot, 1937 was based on a single female. The male is now described from the same locality in the Cyclops Mountains near Jayapura, Papua, Indonesia and the male and female are pictured for the first time. In addition, the status of two other subspecies, *D. albertisi putih* and *D. albertisi tamamitsui*, are re-classified as *D. putih putih* Van Mastrigt, 1996 **stat. nov.** and *D. putih tamamitsui* Morita, 1996 **comb. nov.**

Rangkuman: Deskripsi asli *Delias albertisi discoides* Talbot, 1937 berdasarkan satu betina saja. Dalam karangan ini jantan dideskripsi yang diperoleh dari tempat yang sama, yaitu Pegunungan Cyclops di Jayapura, Papua, Indonesia dan gambar jantan dan betina disajikan untuk pertama kalinya. Selanjutnya status dari dua subspecies direvisi menjadi *D. putih putih* Van Mastrigt, 1996 **stat. nov.** dan *D. putih tamamitsui* Morita, 1996 **comb. nov.**

Key-words: male *D. albertisi discoides*, *D. albertisi putih*, *D. albertisi tamamitsui*, Papua, Cyclops Mountains, **comb. nov.**, **stat. nov.**

Introduction

Five subspecies of *Delias albertisi* (Oberthür, 1880) are currently recognized: *albertisi* from NW Papua, Andai (TL); *albiplaga* Joicey & Talbot, 1922 from Mt Kunupi in the Kobowre Mountains (TL); *discoides* Talbot, 1937 from the Cyclops Mountains near Jayapura (TL), *putih* Van Mastrigt, 1996 from the Kamu Valley (TL) south of the Kobowre Mountains and *tamamitsui* Morita, 1996 from Mogomogo in the north eastern Kobowre Mountains (TL), Papua.

Talbot (1937) described *Delias albertisi discoides* from a single female caught in August 1932 at Hollandia (the former name of Jayapura), 1,000 m, in the Humboldt Bay District, North Dutch New Guinea. In August 1985 the first author captured a male of this subspecies, unfortunately damaged on the right hindwing, in the Cyclops Mountains near Jayapura. Both sexes of *discoides* are pictured for the first time.

Significant differences between *albertisi albertisi* and *albertisi albiplaga* on one side and *albertisi putih* and *albertisi tamamitsui* on the other supports revision of the latter two taxa as a separate species.

Abbreviations

The abbreviations given below have been used throughout the text.

AT - Allotype.

HT - Holotype.

KSP - Koleksi Serangga Papua (Collection of Papuan Insects), Jayapura, Indonesia.

NHM - Natural History Museum - formerly British Museum of Natural History (BMNH), London, United Kingdom.

PT - Paratype.

TL - Type locality.

Description of *Delias albertisi discoides* ♂

(Figs 1-2)

Material: 1 ♂, Jayapura, Cyclops Mountains, 1,080 m, 25.viii.1983, leg. Henk van Mastrigt, KSP.

Diagnosis: The upperside has a closer resemblance to *D. discus discus* than to other subspecies of *D. albertisi* because of the extended white areas on the forewing and hindwing. The underside is close to that of *D. albertisi albertisi*.

Description male: Upperside of forewing greyish black, with a dirty white area from middle of the inner margin, not reaching the discal cell and slightly entering cell M₃; without subapical spots. Upperside of hindwing white; pattern of underside visible from above. Greyish black border from middle of costa to tornus and slightly entering anal border, increasing in width to 8 mm along vein M₁ and from there decreasing to about 1.5 mm at tornus. Underside of forewing brownish black with three pale yellow v-shaped subapical spots, followed by two terminal ones. The first apical spot is very small; the second one is largest and the third one smaller.

The two terminal spots are some smaller than the third subapical spot. The dirty white area is narrower than on the upperside and dark grey vein CuA₂ is visible. The underside of hindwing brownish black, but darker than in the forewing. A yellow to white line along vein Sc+R₁, cutting off a dark brownish black basal spot. A large orange area in the middle of the wing, from the apex, where 2-3 mm to vein 1A+2A, 4 mm from tornus. At the postmedian side of orange area an irregular oval brownish black spot, entering the discal cell. Some yellowish diffusion on dark anal area.

Size of forewing: 38 mm.

Notes:

The holotype female is smaller (length of forewing 35 mm). It bears three small creamy white subapical marks on upperside of forewing, which are absent in male. The apical spots on underside of hindwing are more and larger on female. Also the black borders are slightly wider in female than in male.

The holotype ♂ was mentioned by Talbot as being in the Tring Museum, and is now in the NHM, London (Figs 3-5).

The reason why only a single female and a single male of this subspecies have so far been recorded is probably due to the difficulties in reaching their habitat rather than actual rarity in nature.

Review of status

(Figs 6-11)

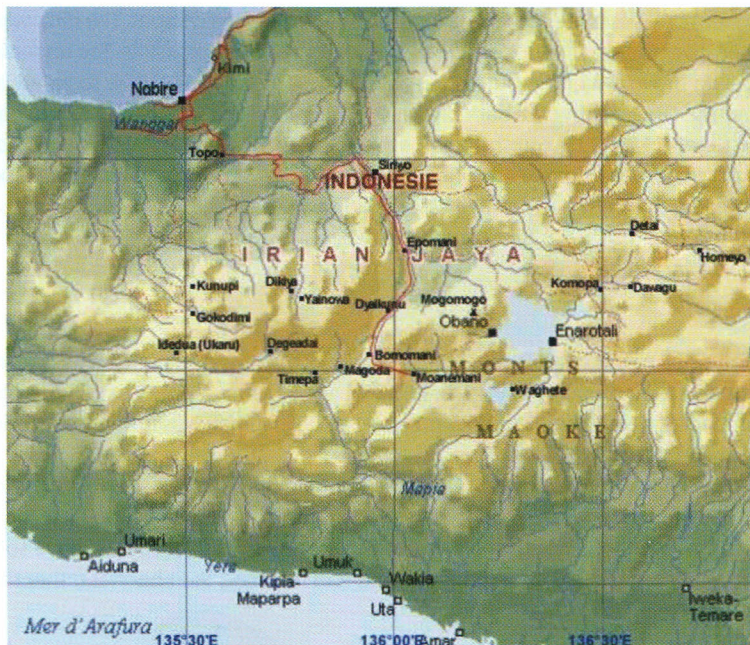
The differences between *putih* and *tamamitsui* at one side and *albertisi* and *albiplaga* at the other can be summarised as follows.

Character	<i>albertisi/albiplaga</i>	<i>putih/tamamitsui</i>
Size	32-35 mm (av. 33.3)	25-32 mm (av. 28.8)
Upperside colour	chocolate brown	grey-black
Underside apical spots	V-shaped	rectangular

The localities of *putih* are on the south side of the Kobowre Mountains and westwards to Modio, Bomomani and Kamu Valley. The only known locality of *tamamitsui* is the environment of Mogomogo, on the north side of the Kobowre Mountains, about 136°11' E; 3°51' S.

The type locality of *D. albertisi albertisi* is Mt Kunupi in the central Kobowre Mountains, at 135°57' E; 3°30' S, close to the above localities.

The differences in size and coloration and the presence of three distinct forms in such a limited geographical area, leads us to believe that *putih* and *tamamitsui* belong to a separate species from *albertisi*.



Map. Kowore Mountains and its environment

The differences between *putih* and *tamamitsui* are as follows. The dark areas on upperside of both wings are black in *putih*, while slightly more grey-black in *tamamitsui*. The white area on the upperside of the hindwing is somewhat larger in *tamamitsui*. On the underside of the hindwing both taxa have a large pale oval area with a central black spot. The coloration of the pale area differs in the two taxa; in *tamamitsui* it is anteriorly greyish white and posteriorly orange, while in *putih* the posterior part is white with a very pale orange hue at the innerside.

Both taxa were described in 1996; however the *Delias*-studies of van Mastrigt, including *putih* were published in NEUE ENTOMOLOGISCHE NACHRICHTEN, Vol. 38, April 1996, while the publication of Morita with *tamamitsui* was published in FUTAO No. 23, August 10, 1996.

For these reasons, the following changes are proposed:

Delias putih putih Van Mastrigt **stat. nov.**

Delias putih tamamitsui Morita **comb. nov.**

Discussions

The status of *discoides* is uncertain and some authors have chosen to treat this taxon as a subspecies of *D. discus*. Talbot regarded it as perhaps "a precursor of the *albertisi* group as it exists now" and retained it as subspecies of *albertisi*, in spite of mentioning the upperside similarities to *discus*. The authors follow Talbot's classification until more specimens become available for study.

The type localities of the two subspecies of *D. putih* **stat. nov.** are not too far from one another (about 30 km). It is quite possible that in the future, when more localities of this species are found, it will be shown that *tamamitsui* is an orange form of putih. The specimen pictured in Yagishita 1993 (Plate 123: 7-8) was erroneously named *D. albiplaga albiplaga*, but is in fact *D. putih* **stat. nov.** and shows some orange scales on the inner side of the white patch on the underside of hindwing.

The subspecies name *albiplaga* is derived from the white markings on the upper side of the hindwing, which distinguish *albiplaga* from *albiplaga s. str.* with yellow in the same areas. Joicey & Talbot (1922) did not figure the species and nor did Talbot (1937) in his monograph. Only D'Abrera (1971, 1977, 1990) has illustrated the underside of the male and the upperside of the female.

Acknowledgements

Thanks are due to the guides from Sentani who assisted the first author in climbing the Cyclops Mountains in 1985. We are very grateful for the assistance of David Lees at the NHM, London, who photographed the holotype female and allowed use of these illustrations in this publication.

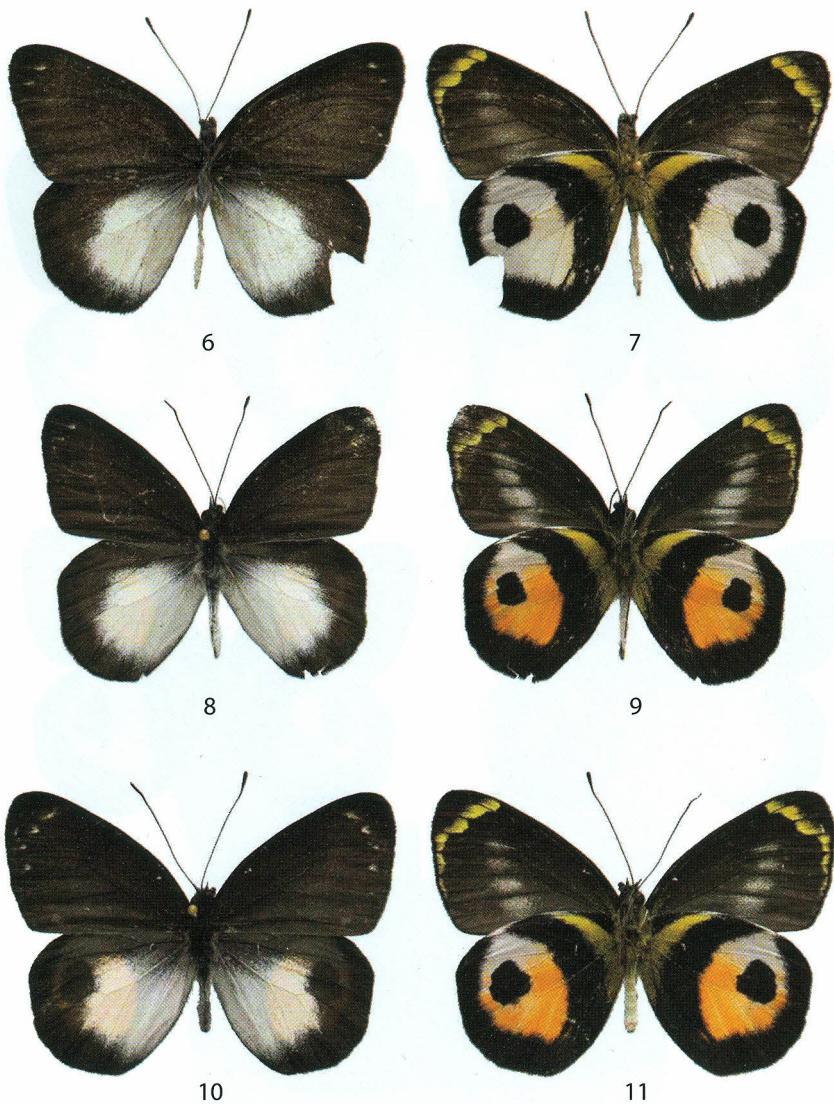
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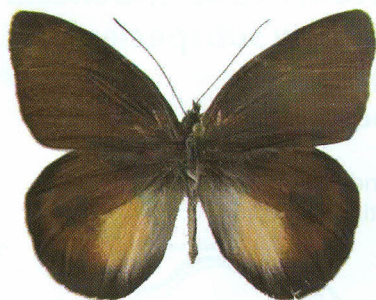
Figs 1-5. *Delias albertisi discoides*: 1-2. upperside and underside ♂ (KSP 22562); 3-4. upperside and underside HT ♀ (NHM); 5. labels of HT. Copyright Figs 3-5: Trustees of the Natural History Museum, London; used with permission.



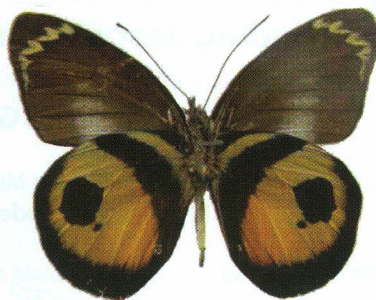
Figs 6-7. *Delias putih putih* Van Mastrigt HT ♂ **stat. nov.:**

6. upperside; 7. underside (KSP 225610).

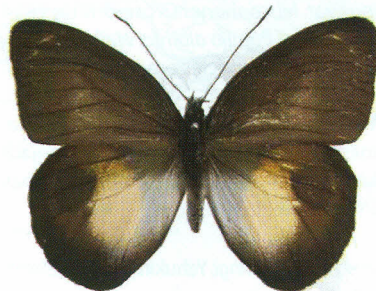
Figs 8-11. *Delias putih tamamitsui* Morita **comb. nov.:** 8-9. upperside/underside ♂ (KSP 22551); 10-11. upperside/underside ♀ (KSP 22557).



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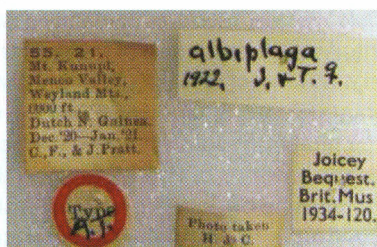
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Figs 12-17. *Delias albertisi albiplaga* Joicey & Talbot, 1922 (NHM): 12-13. upperside/underside ♂; 14-15. upperside/underside ♀ AT; 16. label ♂; 17. labels AT ♀.