

***Delias maaikeae*, a new species from the Cyclops Mountains, Papua, Indonesia (Lepidoptera: Pieridae)**

Chris Davenport¹, Olivier Pequin² & Peter Jan André de Vries³

¹Tynaherrick, Inverness, United Kingdom, Email: chris@nessie.demon.co.uk

²74 rue Nollet, Paris, France, Email: opequin@ymail.com

³Sentani, Jayapura, Papua, Indonesia, Email: peterjan_devries@wycliffe.nl

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Abstract: A new species of genus *Delias* Hübner, 1819 (Lepidoptera: Pieridae) from the Cyclops Mountains of Papua Province, Indonesia is described and illustrated: *Delias maaikeae* **spec.nov.** A comparison is made with some allied species.

Rangkuman: Deskripsi spesies baru genus *Delias* Hübner, 1819 (Lepidoptera: Pieridae) dari Pegunungan Cyclops di Propinsi Papua, Indonesia, disajikan dan digambarkan: *Delias maaikeae* **spec.nov.** Spesies baru ini diperbandingkan dengan spesies lain yang dekat.

Keywords: *Delias*, new species, Cyclops Mountains

Introduction

The Cyclops Mountains on the northeast coast of Papua Province, Indonesia are known to be a center of biodiversity and endemism although exploration has been limited due to the steep topography and absence of water sources at higher altitudes. Only four montane species of the genus *Delias* Hübner, 1819 have until now been recorded, all in small numbers; *D. albertisi discoides* Talbot, 1937, *D. pulla pulla* Talbot, 1937, *D. kummeri* Ribbe, 1900 and *D. campbelli campbelli* Joicey & Talbot, 1920. A further five species have been recorded from low altitudes around Jayapura and Sentani. Although the highest summit has an altitude of 2150 m, few of the *Delias* species that inhabit the lower montane zone (1000-2000 m) elsewhere on the island of New Guinea have been recorded from the Cyclops Mts. The discovery of a new and distinct member of the *Delias bornemanni* group at an altitude of 1500 m in June 2017 is therefore significant.

Depositories and abbreviations

KSP - Koleksi Serangga Papua, Waena, Indonesia

NHM(UK) - Natural History Museum, Entomology dept., London, United Kingdom

MZB – Museum Zoologicum Bogoriense, Bogor, Indonesia

PNG - Papua New Guinea

m - meters (above sea level)

Description of the new species:

***Delias maaikeae* spec. nov.** (figs 1-2, 9a, 9d)

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Holotype ♂, MZB: INDONESIA, Cyclops Mts , 1500 m, S: 02°31.246', E:140°30.538', 24.vi.2017, leg. P.J.A. de Vries.

Description: Forewing length 29 mm. Upperside forewing ground colour black, diffuse grey scales at base. Upperside of hindwing black with a pale grey anal patch, extending from anal margin to vein M1, diffuse grey scales in median and basal area beyond. Underside of forewing ground colour dark grey. Four white subapical spots, the lowest smaller and less distinct, veins black. Underside of hindwing ground colour black, red basal spot oval (falcate in *bornemanni*), oval red cell spot proximate to discocellular veins, a series of six red subterminal streaks, narrowly bordered with white scales, between Rs and CuA2. The streak in space Rs-M1 more basally extended than in *bornemanni*. White apical spot in space R1-Rs.

Genitalia (fig. 9a, d): Valve with distal edge produced to a short and sharp process, similar to *nais*. Dorsal edge gently incurved at middle. Uncus with tegumen stout and broad. Lobe of moderate length slightly incurved on dorsal edge, lip short and broad.

Diagnosis: The new species is distinguished from *D. bornemanni* and *D. nais* by the predominantly black coloration of the upperside. The hindwing underside resembles *D. bornemanni* but is distinguished by the extended red streak in space Rs-M1 and the white scaling between the red subterminal spots, both characteristics of forms of *D. nais*.

Distribution: Endemic to the Cyclops Mountains, north east Papua Province, Indonesia.

Etymology: This species is dedicated with love by the third author/collector to his wife Mrs. Maaïke de Vries-Siebring for her steadfast support: "Thank you for making my dreams part of yours".

Discussion: *Delias nais* has been recorded from the Foja Mountains and Torricelli Mountains, both isolated ranges of similar altitude on the northern coast of New Guinea. The new species has similarities on the underside to *D. bornemanni*, known only from the Owen Stanley Range in eastern Papua New Guinea, approximately 900 km southeast of the Cyclops Mountains, and on the upperside to *Delias pratti* Kenrick, 1909, which is endemic to the Arfak Mountains, 800 km to the west. A closely allied species of *D. pratti*, *D. kristianiae* Van Mastrigt, 2000 from the Foja Mountains, is analogous, being distinguished only by divergent upperside markings.

Description of a new species on the basis of a single specimen is normally discouraged, however the infrequency of records from the Cyclops Mountains and the distinctive phenotype of the known specimen support publication of the description.

Although *Delias* are often seen flying at tree top level near the type location, they are very difficult to collect and to identify in the field. The third author has recently recorded *D. albertisi discoides* Talbot, 1937, *D. pulla pulla* Talbot, 1937 and *D. campbelli campbelli* Joicey & Talbot, 1922 at a similar altitude (1500 m). *Delias aruna aruna* (Boisduval, 1832) is locally abundant at around 500 m altitude.

Acknowledgements

The discovery of this species was enabled by the late Henk van Mastrigt, whose passion for butterflies first inspired the third author, and by Mike Wild who has rekindled this interest. We are grateful to the trustees of the Natural History Museum and the Koleksi Serangga Papua for permission to reproduce photographs of specimens in their collections.

References

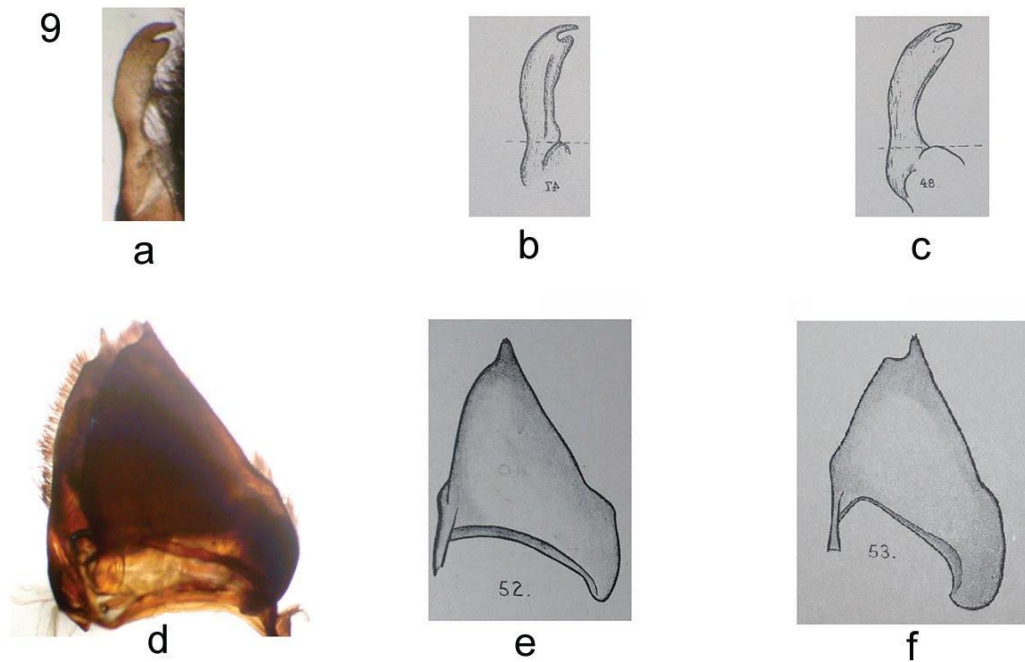
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Figs 3 & 4 © Reproduced with permission of the Trustees of The Natural History Museum London



Figs 1-2. *Delias maaikae* spec.nov. holotype ♂, Cyclops Mts., Papua, Indonesia, coll. MZB: fig. 1. dorso; fig. 2. verso. **Figs 3-4.** *Delias bornemanni* ♂, Owgarra, Owen Stanley Range, PNG, coll. NHM(UK): fig. 3. dorso; fig. 4. verso. **Figs 5-6.** *Delias nais nais* ♂, Bilogai, Paniai region, Papua, Indonesia, coll. KSP: fig. 5. dorso; fig. 6. verso. **Figs 7-8.** *Delias pratti* ♂, Menyambu, Arfak Mts, Papua Barat, Indonesia, coll. KSP: fig. 7. dorso; fig. 8. verso.



Figs 9a-f. Male genitalia. **Fig. 9a.** *Delias maaikae* uncus; **fig. 9b.** *D. bornemanni* uncus; **fig. 9c.** *D. nais* uncus; **fig. 9d.** *D. maaikae* valve; **fig. 9e.** *D. bornemanni* valve; **fig. 9f.** *D. nais* valve. (Figs. 9b, c, e & f: after Talbot, 1937).

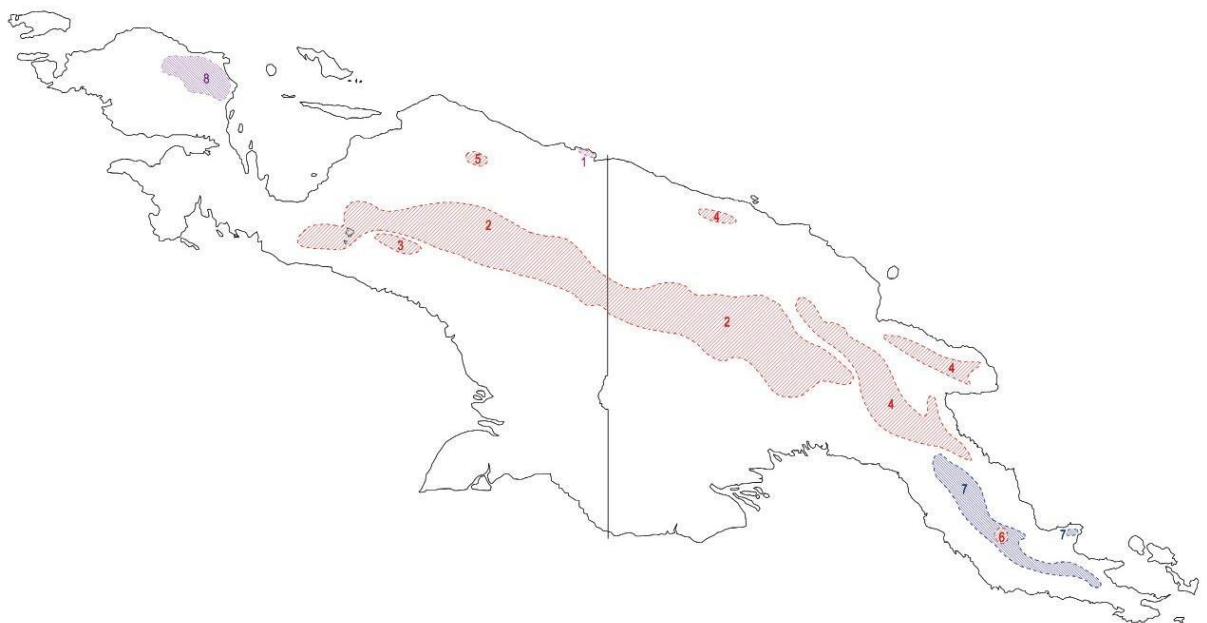


Fig. 10. Distribution range of *Delias maaikae* and allied species. 1- *Delias maaikae*; 2 - *D. nais nais*; 3 - *D. nais odilae*; 4 - *D. nais keysseri*; 5 - *D. nais beehleri*; 6 - *D. nais aegle*; 7 - *D. bornemanni*; 8 - *D. pratti*.