

Notes on West Papuan (Indonesia) *Hypochrysops* C. & R. Felder, 1860 (Lepidoptera: Lycaenidae)

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Abstract: *Hypochrysops fuscus* **spec. nov.**, a new species of the *Hypochrysops theon*-group is described from Sorong in NW West Papua and new distributional records of *H. elgneri*, *H. castaneus*, *H. arronica*, and *H. hippuris* are given.

Rangkuman: *Hypochrysops fuscus* **spec. nov.**, spesies baru kelompok *Hypochrysops theon* dipertelakan dari Sorong, Barat Laut West Papua dan penemuan baru disajikan, berkaitan dengan distribusi dari *H. elgneri*, *H. Castaneus*, *H. arronica*, and *H. hippuris*.

Key-words: *Hypochrysops theon*-group, *Hypochrysops fuscus* **spec. nov.**, distribution.

Introduction

Hypochrysops is a very diverse genus of Australasian lycaenids. However most species are rare or very rare and knowledge about distribution and systematics is still insufficient. Members of the *Waigeum*-group are particularly rare, as mentioned by Fruhstorfer (1915) about 100 years ago. The most recent revision of *Hypochrysops* is by Sands (1986) and current taxonomy relies much on this work as it still is the most comprehensive review of the genus. Few new species have been described since then (Yagishita, 2003, 2004, Lane & Edwards, 2004), and many of the problems addressed by Sands still remain though Parsons (1998) has clarified the status of some of the P.N.G. taxa. Due to the scarcity of many species, it is still difficult to give a conclusive interpretation of numerous taxa.

Most of the species assigned to *Hypochrysops* show metallic blue or greenish, sometimes even orange coloured wings in the males whereas females are usually brown with more or less restricted metallic scaling at the basal half of the wings. Apart from these, there is a small group, previously known as genus *Waigeum* Staudinger 1895, where the males are reminiscent of females, showing mainly brown wings with a white forewing discal band and very restricted metallic scales basally. Male specimens of these species can easily be mistaken for females. The new species described here is an example of this and it is most likely that it

is already known but possibly misidentified and regarded as a female by earlier workers. It looks very much like a typical *Hypochrysops* female, e.g. *H. heros imogena* D'Abbrera, 1971 or *H. coruscans coruscans* Grose-Smith, 1897.

Description of the new species

Hypochrysops fuscus **spec. nov.**

(Figs 1-4)

Holotype: male, West Papua, Sorong, i.-ii. 2011 [will be deposited in coll. KSP, Jayapura]

Paratype: one male, West Papua, 60km N of Sorong, 20. ii. 2004 [coll. Schröder]

Male: Forewing: length 17-18 mm. Above dark grey-brown, apex termen rounded. Metallic green-blue scaling restricted to the lower, basal part of the cell and basal, lower part of space 1a and 1b. A creamy-white, elongated area traversing the basal parts of space 1a, 1b, 2 and 3. Wing veins brown. Hindwing almost completely grey-brown, with only a few scattered metallic scales basally and along vein 2, directly below cell. Hindwing basally whitish to light grey, the white underside subbasal band shining through. Cells 7 and 8 grey-white. Cilia white.

Underside forewing dark-brown. Costa broadly metallic green-blue, subapically a narrow green-blue line and a series of green-blue subterminal spots. The area below the cell whitish, but fading into grey-brown from towards termen, except for cell 1a, remaining whitish. Greenish scaling may occur along the white patch in cells 3 and 4. Hindwing grey brown with a broad, white subbasal and a greenish postmedian bar. A subterminal line from apex to tornus metallic green.

Characters of the genitalia are of the general *Hypochrysops*-pattern but the species may be separated especially in regard to the characters of the aedeagus: *H. fuscus spec. nov.* has a large group of cornutal spines in the middle and a second band-like group of spines with one larger, slightly curved spine near the apex. A large pencil-like process is extending through the orifice. Valvae are almost rectangular, closely resembling those of *H. coruscans*.

The female is unknown.

Etymology: The name refers to the brown coloration of the species.

Discussion:

Dissection revealed most interesting morphological characters which relate the species to the *theon*-species group *sensu* Sands (1986). An especially large spine characterizes the aedeagus (fig. 3). This is a feature which occurs only within the

theon species-group and is particularly well developed in *H. dohertyi* Oberthür 1894 and *H. herdonius* Hewitson, 1874. While *H. dohertyi* is characterized by a much stronger developed green metallic scaling, the new taxon appears to be especially close to *H. herdonius*, which differs in having triangular valvae and its metallic band of the hindwing, which encloses transverse rows of black spots (Sands, 1986: fig. 136).

The wing colouration and general pattern of the new species is very similar to *H. heros*, and at first sight could be regarded as a subspecies or a variation of *heros* with much reduced blue-green scales. Colour in *H. heros* is known to vary strongly and shades of blue or green may vary within populations as well as extent of colours. Therefore ssp. *imogena* D'Abrera, 1971 was regarded as a doubtful taxon by Sands (1986: 90). In addition, both taxa may show a sympatric occurrence: nominotypical ssp. *heros* is the subspecies of West Papua (Humboldt Bay), *heros polemon* Fruhstorfer, 1915 was described from SE and central West Papua, and the specimens described here are from Sorong in the westernmost part of the Doberai Peninsula.

However the genitalia of *H. heros* differ strongly from the genitalia of the newly described form. Valvae are much narrower at the apex and the aedeagus does not possess a pencil like process (Sands, 1986: 91, fig. 74).

The current treatment of the species formerly known as *H. mioswara* Bethune-Baker, 1913 (: 566) remains problematic. Its type specimen, regarded as a female by Sands, is brownish, without any blue scaling in the cell of the forewing, obviously belonging to the *Waigeum*-group. D'Abrera (1971: 322) figured the type specimen which has lost its abdomen and thus its sex as well as its true identity remain uncertain. However, it has been shown, that such brownish specimens may be mismatched males. Sands (1986: 90) introduced the nomen novum *H. echo* Sands, 1986 for this taxon [junior homonym of *mioswara* Bethune-Baker, 1913: 568] and subsequently regarded it as a synonym of *heros* [accordingly, concerning pagination, the older name *mioswara* remains valid for a whitish/brown species of the *calliphon*-group]. The decision taken by Sands to synonymize this species was understandable and convenient three decades ago, when DNA sequencing was a distant reality. However the type exists and future research will show if his decision can be confirmed. A slight chance remains that *echo* may be the male of an undescribed species.

H. coruscans is a sympatric species which is phenotypically very close to *fuscus* n.sp. Males of both taxa show a close resemblance, with *coruscans* being slightly larger and having a slightly more rounded wing-shape (figs 9-10). Males of both can easily be confused with males and females of the same species. Wing markings are rather similar, but *coruscans* usually shows some green scales within the cell on the forewing underside. In contrast, the aedeagus of *coruscans* has small cornuti subapically but no pencil like spine and valvae are more stout and quadrate.

Metallic scaling may be completely missing on the wing-upperside in *coruscans* (Sands 1986: 95).

Distributional notes

Recent collections in West Papua (Sorong and Timika) revealed range extensions of *Hypochrysops*-species previously unrecorded in this area or known only from Papua New Guinea (PNG).

H. arronica C. & R. Felder, 1859

(figs 5-6)

The distribution of the nominotypical subspecies covers the Aru Islands and mainland New Guinea. The specimen figured here from Timika is of an aberrant female, showing very unusual underside markings on the hindwings (scales on the ups forewing are partly missing).

H. castaneus Sands, 1986

(figs 7-8)

H. castaneus was described from a small series of specimens from localities across New Guinea. It is recorded here from Sorong and thus its range also covers the westernmost part of West Papua.

H. elgneri (Waterhouse & Lyell, 1909)

(figs 11-12)

H. elgneri is primarily distributed in Australia. However, it has also been recorded from Southern PNG and also from Timika on the southern coast of West Papua.

H. hippuris hippuris Hewitson, 1874

(figs 13-14)

Sands (1986: 86) described a new subspecies from mainland New Guinea and gave the occurrence of his *H. hippuris nebulosis* Sands as southwest PNG. The specimen recorded here was collected at Timika but does not correspond with ssp. *nebulosis* as it does not have the diagnostic, larger white patches on the forewing upperside. Therefore the specimen is determined as *H. hippuris hippuris*, which is known so far only from the Aru Islands.

Acknowledgements

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Literature

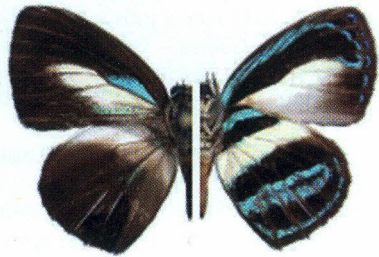
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Figs 1-2. *Hypochrysops fuscus* HT ♂ **spec. nov.**: 1. upperside; 2. underside.



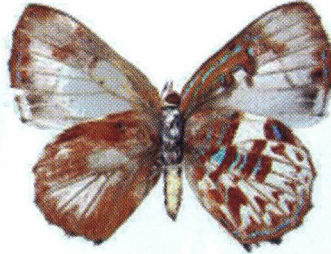
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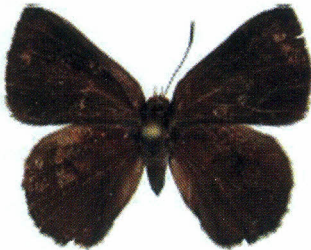
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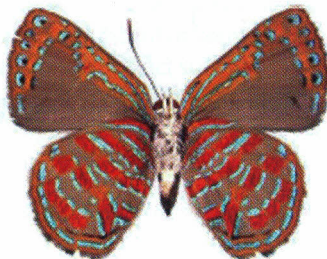
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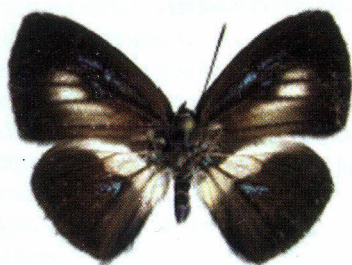


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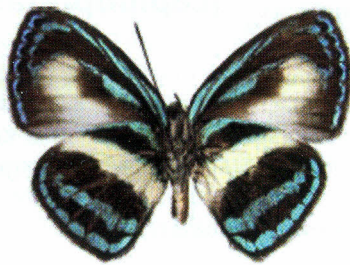


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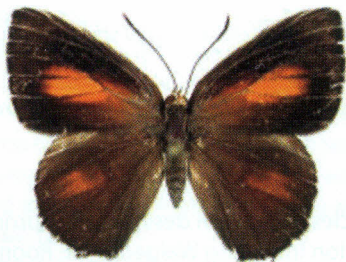
Figs 3-4. *Hypochrypsops fuscus* ♂ **spec. nov.:** 3. genitalia HT ♂; 4. upperside & underside PT ♂. **Figs 5-6.** *H. arriconae* ♀: 6. upperside; 7. underside. **Figs 7-8.** ; *H. castaneus* ♂: 7. upperside; 8. underside.



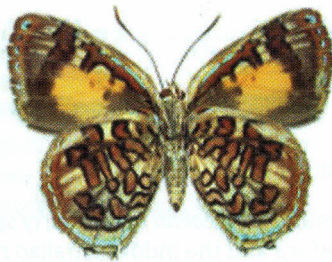
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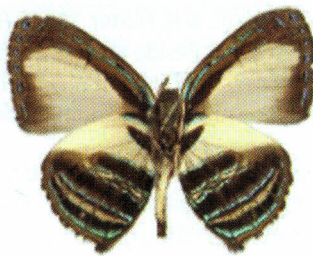
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Figs 9-10. *Hypochrysops coruscans* ♂: 9. upperside; 10. underside.

Figs 11-12. *H. elgneri* ♂: 11. upperside; 12. underside.

Figs 13-14. *H. hippuris* ♂: 13. upperside; 14. underside.