

***Thaumantis hainana* (CROWLEY, 1900), a distinct species**

(Lepidoptera, Nymphalidae)

by

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Abstract: *Thaumantis hainana* (CROWLEY, 1900) **stat. rev.** from Hainan, China is not an insular subspecies of *T. diores* DOUBLEDAY, 1845, and it can be easily distinguished from the latter by the characters of σ genitalia. In this paper, *T. hainana* (CROWLEY) is also recorded from Guangxi province for the first time.

Materials in this study are deposited in the Institute of Zoology, Chinese Academy of Sciences, Beijing, China (IZCAS). The photographs of the type of *Nandogea hainana* CROWLEY, 1900 were provided by Mr. JIM REYNOLDS and Mr. PHIL ACKERY, The Natural History Museum, London, UK (NHML, former BMNH).

The genus *Thaumantis* HÜBNER, 1826 (= *Nandogea* MOORE, 1894; *Kringana* MOORE, 1895) (Morphinae: Amathusiini) is a small genus and inhabits the tropical rainforests of the Oriental Region. Until now, four species have been recognised from this genus, they are: *T. odana* (GODART, 1824), *T. noureddin* WESTWOOD, 1851, *T. klugius* (ZINKEN-SOMMER, 1831) and *T. diores* DOUBLEDAY, 1845. *Nandogea hainana* CROWLEY, 1900 was described from Hainan Island as a distinct species only basing upon superficial characters. STICHEL (1906) treated the taxon *hainana* CROW. as a subspecies of *T. diores* DOUB. Hitherto, all of the following authors agreed with STICHEL (1906) and considered that *T. diores hainana* (CROW.) was an endemic subspecies of Hainan.

Both, KIRCHBERG (1942) and CHOU (1998), figured the σ genitalia of *T. diores* DOUB. in their own works. Surprisingly, their illustrations of the σ genitalia of *T. diores* DOUB. are quite different from each other. After a study on specimens of *T. diores* DOUB. from different localities in China (SE. Tibet, S. Yunnan, Guangxi and Hainan), the author discovers that the σ genitalia of specimens from Hainan and Guangxi are similar to the figure in CHOU (1998), and the σ genitalia of specimens from Tibet and Yunnan are similar to the figure in KIRCHBERG (1942). The differences of the σ genitalia of these two kinds are so great that they must belong to different species. Therefore, the species status of *T. hainana* (CROW.) is recovered here, and its range is extended to Guangxi province. The populations from SE. Tibet and S. Yunnan still belong to *T. diores* DOUB. Some characters of the σ genitalia of the *T. diores* DOUB.-species group should be mentioned here. Tegumen is small in size and with its caudal apex attached a short and acute projection for which the term “uncus anticus” was used in KIRCHBERG (1942). The uncus is long and well developed, and its distal half is narrow and bent downward as a hook. A short projection is present and attaches to the base of the dorsal ridge of uncus, and KIRCHBERG (1942) used the term “crista” for this projection. Gnathos are lost. The teeth on the dorsal margin of valva are variable, and sometimes the differences occur between two valvae of one individual.

***Thaumantis hainana* (CROWLEY, 1900) stat. rev.** (text-figs: 1, 2, 5, 6; colour plate 8: 1-3)

Nandogea hainana CROWLEY, 1900, Proc. Zool. Soc. London 1900: 505. TL: Hainan

Thaumantis diores hainana, STICHEL, 1906, Gen. Ins. 36: 18.

Material: 2 ♂♂, Hainan: Lingshui, 8.X.1934, coll. BAI PO; 1 ♂, Hainan: Lingshui, Mt. Diaoluoshan, 260 m, 5.V.2007, coll. LANG SONG-YUN; 3 ♂♂, 2 ♀♀, Hainan: Mt. Jianfengling, 2.VII.1981, 3.III-1.VIII.1983, colls. GU MAO-BIN et al.; 1 ♂, Hainan: Mt. Wuzhishan, Shuiman, 730-900 m, 9.V.2007, coll. LANG SONG-YUN; 1 ♂, Guangxi: Jinxiu, 900 m, 20.V.1999, coll. Zhang YAN-ZHOU (all IZCAS).

Diagnosis: *Thaumantis hainana* (CROW.) **stat. rev.** can be easily distinguished from *T. diores* DOUB. by the following combination of characters:

1. It is usually smaller in size.
2. Iridescent blue patches on dorsal surface of both wings are restricted, whereas in *T. diores* DOUB. they are sometimes extensive.
3. The dorsal surface of tegumen is smooth, whereas in *T. diores* DOUB. it has several irregular grooves on its caudal half.
4. Uncus anticus is coniform-shaped, whereas in *T. diores* DOUB. it is usually slightly flat.
5. Crista is strongly built as a finger like projection, whereas in *T. diores* DOUB. it is very slender and flat.

Notes: Only one worse broken specimen of this species from Guangxi is studied. It is as large as *T. diores* DOUB. in size. Maybe the continental population of *T. hainana* (CROW.) **stat. rev.** deserves a separated subspecies.

Thaumantis diores DOUBLEDAY, 1845 (text-figs: 3, 4, 7, 8; colour plate 8: 4, 5)

Ann. Mag. Nat. Hist., 16: 234. TL: Sylhet

Thaumantis ramdeo MOORE, 1857, in HORSFIELD & MOORE, Cat. lep. Ins. Mus. East India Comp. (1): 215. TL: Darjeeling

Material: 1 ♂, Yunnan: Xishuangbanna, Xiaomengyang, 850 m, 5.V.1957, coll. D. PANFILOV; 1 ♂, Yunnan: Xishuangbanna, menglun, 580 m, 12.IX.1993; 2 ♀♀, Yunnan: Xishuangbanna, menghun, 710-1400 m, 1958.VI.6, coll. HONG CHUN-PEI; 1 ♀, Yunnan: Xishuangbanna, mengla, 620-650 m, 1958.XI.16; 1 ♀, Tibet: Bome, Yigong, 2300 m, 27.VIII.1983, coll. HAN YIN-HENG; 1 ♂, 2 ♀♀, Tibet: Medog, Beibeng, 800-900 m, 5-29.VIII.1974, coll. HUANG FU-SHENG; 1 ♂, 1 ♀, Tibet: Medog, Beibeng, 850 m, 23-29.V.1983, colls. HAN YIN-HENG & LIN ZAI; 2 ♀♀, Tibet: Medog, Yarang, 800 m, 4.VIII.1974, coll. HUANG FU-SHENG; 3 ♂♂, Tibet: Medog, Yarang, 790 m, 13.VIII.2006, colls. LANG SONG-YUN & CHEN FU-QIANG (all IZCAS).

Notes: Two subspecies are known for this species, they are *T. d. diores* DOUB. (Range: S. Yunnan, SE. Tibet; NE. Bangladesh, NE. India, Sikkim, Bhutan, N. Myanmar, N. Laos, N. Vietnam) and *T. d. splendens* TYTLER, 1939 (Range: S. Myanmar, Thailand and S. Laos). The latter has more vivid and extensive iridescent blue patches.

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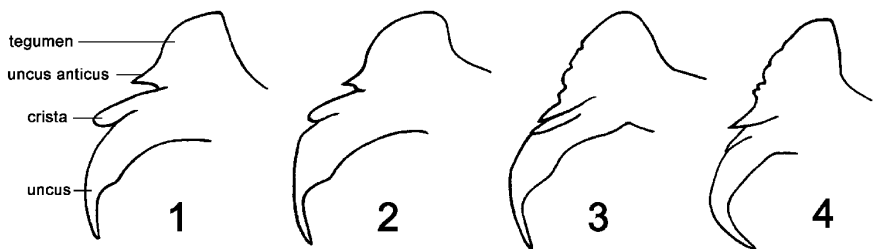


Fig. 1-4: ♂ genitalia (left lateral aspect of dorsal parts). (1, 2) *Thaumantis hainana* (CROWLEY, 1900) **stat. rev.**, (1) Lingshui, Hainan, (2) Jinxiu, Guangxi. (3, 4) *Thaumantis diorea* DOUBLEDAY, 1845, (3) Xishuangbanna, Yunnan, (4) Medog, SE. Tibet.

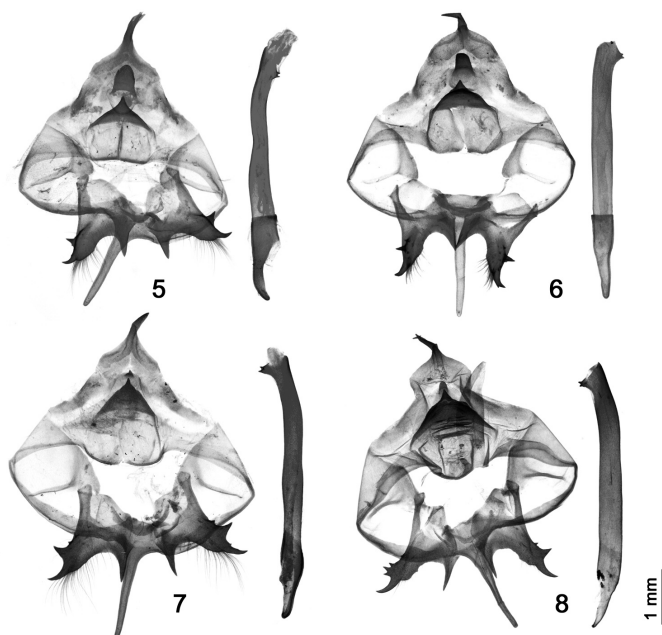


Fig. 5, 6: ♂ genitalia of *Thaumantis hainana* (CROWLEY, 1900) **stat. rev.**, (5) Lingshui, Hainan, (6) Jinxiu, Guangxi.

Fig. 7, 8: ♂ genitalia of *Thaumantis diores* DOUBLEDAY, 1845, (7) Xishuangbanna, Yunnan, (8) Medog, SE. Tibet.

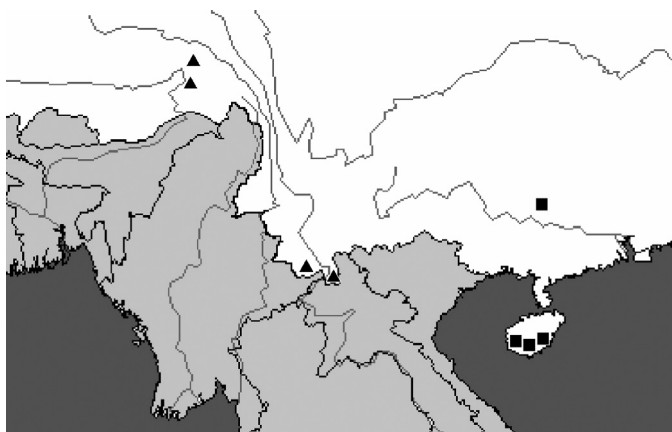


Fig. 9. Distribution map of *Thaumantis hainana* (CROWLEY, 1900) **stat. rev.** (black square) and *Thaumantis diores* DOUBLEDAY, 1845 (black triangular) in China.

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