

106 年度行政院農業委員會林務局林業管理計畫

臺灣地區鱗翅目蝴蝶誌編纂（III）花弄蝶亞科及
弄蝶亞科

**Fauna of Taiwan Butterflies (III) Pyrginae and
Hesperiinae**

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目錄

摘要.....	3
一、前言.....	4
二、材料及方法.....	7
三、研究結果.....	8
四、參考文獻.....	8
附錄一、臺灣地區鱗翅目蝴蝶誌花弄蝶亞科與弄蝶亞科初稿	

摘要

本計畫規劃以六年逐步進行臺灣蝴蝶誌之纂寫，包括本島及離島相關類群，編寫上包含物種名稱、模式產地、模式標本存放處、異名條列、分類特徵（包括成蝶及其生殖器）敘述與圖示、分布、生態（如幼蟲寄主植物等）、變異及多型性等資料加以編寫說明。本年度已完成「臺灣蝴蝶誌—鳳蝶科」、「臺灣蝴蝶誌—粉蝶科」之出版各 1000 冊以及「臺灣蝴蝶誌—弄蝶科」之文稿撰寫，並已檢視同物異名相關文獻確認模式標本存放處、整理引証標本資料、處理成翅紋影像、製作雌、雄交尾器玻片，以及原始發表及相關文獻之建檔。形態描述已完成所有種類之英文稿及科、亞科及屬級介紹，中文稿將於未來出版工作時，連同序文、目錄、索引、版權頁等合併進行整體排版。

關鍵詞：蝴蝶誌、弄蝶科、離島、蝶相。

一、前言

(一) 計畫緣起

臺灣的蝴蝶資源豐富，民眾及學術界均高度關注並進行研究、保護及教育運用。時至今日，坊間已有許多專書及各種出版物介紹臺灣蝴蝶的鑑定（例如陳維壽1974《臺灣區蝶類大圖鑑》；李俊延、王效岳1999《臺灣蝴蝶寶鑑》；李俊延、王效岳2000《彩蝶鑑賞》；徐堉峰2013《臺灣蝴蝶圖鑑》上中下三冊；林春吉、蘇錦平2013《臺灣蝴蝶大圖鑑》）、生活史（例如李俊延、王效岳1990-1997《臺灣蝶類圖說》；徐堉峰1999、2002、2007《臺灣蝶圖鑑》第一~三卷；林春吉2008《臺灣蝴蝶食草與蜜源植物大圖鑑》上下冊；呂至堅、陳建仁2014《蝴蝶生活史圖鑑》）、觀察法（例如李俊延、王效岳1996《蝴蝶的觀察與飼育》）、飼養（例如林柏昌、林有義2008《蝴蝶食草圖鑑》）、發現史（吳永華2012《宜蘭蝴蝶發現史》），甚至文學著作（例如吳明益2003年《蝶道》）。然而，與植物學研究相比較便可以發現，相關出版品雖多，卻缺乏一套全面性論述臺灣蝴蝶的著作。植物誌英文版在國科會（現今科技部前身）支持下第一版於民國64至68年間世之後，於民國85年大幅增修成為第二版，隨即由林務局支持出版中文版之「臺灣維管束植物簡誌」（楊等，民88）。動物部份類群在國科會支持下出版英文版動物誌（如）。普受國人矚目的蝴蝶迄今却缺乏一份分類論述完整詳盡的專著，不能說沒有遺珠之恨。

目前國內解說較完整之蝴蝶專書內容均以臺灣本島為主，尚未有涵蓋離島蝶相的著作。離島蝶相組成及來源與臺灣本島頗為不

同，但目前相關資料散見於一些地區性出版品（例如李俊延、王效岳2000《馬祖彩蝶圖鑑》），且因歷史因素，常有誤用本島資料的情形，藉由編寫嚴謹蝴蝶誌的計劃將離島蝴蝶資料一併進行整理論述，實有其必要性。

本計劃擬分6年逐步進行臺灣蝴蝶誌（包括本島及離島之編寫），編寫方式計劃中、英文對照，內容預定包含物種名稱、模式產地、模式標本存放處、異名條列、分類特徵（包括成蝶及其生殖器）敘述與圖示、分布、生態（如幼蟲寄主植物等）、變異及多型性等資料加以編寫說明。各物種均將提供圖片配合文字說明，並在有必要時圖示模式標本圖片。編寫之內容預定以符合學術研究之規格，輔以有利於各界人士之內容。

(二) 臺灣地區鱗翅目昆蟲誌編纂相關研究

生物誌 Biota 的纂寫在臺灣地區以植物誌的完成度較為完善，先後已有六冊的 Flora of Taiwan 出版，動物部分則於 2007 年由國科會開始推行生物誌計畫之編纂。生物誌的編纂背後有幾項意義與目的，包括科學研究、教育、專業訓練、資源管理等，過去國科會該計畫在鱗翅目方面已完成部分蛾類分類群之生物誌編寫，可作為未來臺灣地區在蝶類誌編纂上的參考，這些已編寫完成的蛾類生物誌包括 Yen and Wu (2009 a) 《台灣生物誌六足總綱鱗翅目夜蛾總科夜蛾科蕨夜蛾亞科》、Yen *et al.*(2009 a) 《鈎蛾總科鈎蛾科大鈎蛾亞科》、Yen and Wu (2009 b) 《錨紋蛾總科錨紋蛾科錨紋蛾亞科》及 Yen *et al.*(2009 b) 《旋蛾總科草潛蛾科篩蛾亞科》等四部，這些內容都將作為本研究蝶類誌撰寫之參考。

(三) 本年度計畫目標

- 1、出版臺灣蝶類誌-鳳蝶科1000本。
- 2、臺灣地區鱗翅目蝴蝶類誌粉蝶科審稿及校稿。
- 3、出版臺灣蝶類誌-粉蝶科1000本。
- 4、花弄蝶亞科及弄蝶亞科種類中、英文稿編纂。
- 5、花弄蝶亞科及弄蝶亞科種類標本彩圖圖版、美編及排版。
- 6、持續進行相關專業技術人員培訓。

二、材料及方法

- 1、統計臺灣本島及離島地區花弄蝶亞科與弄蝶亞科類群不同種及亞種，並包含原生種、疑問種、偶發性及迷蝶。收集每一分類群之標本，檢視各標本館及文獻，建立引證標本(vouchers)及分佈(distribution)資料。
- 2、文獻探討，建立同物異名表及各學名出處文獻及模式標本存放地點資訊。
- 4、形態資料建一翅紋：(a)透過採集製作、各大標本館交換及整理本研究團隊標本收藏，選取完整標本，包括雌、雄、季節型及多型性等個體，進行正反面影像拍攝、比例尺標示 (b)圖像去背後製處理及圖版排版。
- 5、形態資料建立一交尾器形態：(a)將雌、雄腹部浸泡於KOH或NaOH溶液進行軟化幾丁質及去脂，解剖腹部取出雌、雄交尾器 (b)脂肪去除及鱗片清除作業 (c)染色 (d)以封片膠進行交尾器包埋，並清除氣泡，水平靜置數日至封片膠凝固 (e)以顯微及微距拍攝技術進行交尾器影像建置 (f)圖像去背後製及比例尺標示 (g)交尾器圖版排版。
- 6、形態描述：(a)進行翅紋形態描述，包括雌、雄、季節型、多型性等變異；(b)進行交尾器形態描述，含雌、雄交尾器。
- 7、分佈資料：透過文獻及証據標本整理分佈資訊。
- 8、寄主植物：根據本研究團隊寄主植物資料庫，並整理國內外相關文獻，提供各類群國內及不同地理區可能的寄主植物資訊。
- 9、註記：文獻探討物種其它相關研究進展，例如生活史、不同學者分類見解、生態等。

- 10、文稿撰寫：各項目編寫以中、英文兩語言進行。
- 11、排版：文稿及圖版以專業美編軟體進行排版，以便後續出版印刷。
- 12、技術人員培訓：(a)培訓兩名博、碩士研究生進行交尾器形態資料建立技能；(b)培訓兩名碩士研究生及大學部專題生進行翅紋形態資料建立技能。

三、研究結果

- 1、本年度計畫出版「臺灣蝴蝶誌—鳳蝶科」與「臺灣蝴蝶誌—粉蝶科」各1000冊。
- 2、本年度計畫將所編纂之「臺灣地區鱗翅目蝴蝶誌花弄蝶亞科與弄蝶亞科」初稿呈現於附錄。

四、參考文獻

- Yen, S. H., and S. Wu. 2009a. Biota Taiwanica Hexapoda Lepidoptera Noctuoidea Noctuidae Eriopinae. National Sun Yat-Sen University. R. O. C. 87 pps.
- Yen, S. H., and S. Wu. 2009b. Biota Taiwanica Hexapoda Lepidoptera Calliduloidea Callidulidae Callidulinae. National Sun Yat-Sen University. R. O. C. 23 pps.
- Yen, S. H., C. H. Wei, and K. Andras. 2009b. Biota Taiwanica Hexapoda Lepidoptera Gelechioidea Elasmidae Ethmiinae. National Sun Yat-Sen University. R. O. C. 51 pps.
- Yen, S. H., Y. L. Chen, and Shipher Wu. 2009a. Biota Taiwanica Hexapoda Lepidoptera Drepanoidea Drepanidae Cyclidiinae. National Sun Yat-

Sen University. R. O. C. 19 pps.

附錄：臺灣地區鱗翅目蝴蝶誌花弄蝶亞科與弄蝶亞科初稿

Family HESPERIIDAE Latreille, [1809]

The family is the single representative included in the Hesperioidea, with about 3500 species distributed worldwide (Ackery et al (1999). The common name for the members of the family, skippers, come from their darting, irregular flight. A few authors exclude the family from “butterflies” (e, g. D’ Abrera, 198), but Heikkilä et al. (2011)’ s molecular phylogeny argue that Hesperidae is sister to all butterfly families excluding Papilionidae.

The monophyly of Hesperidae is well supported by both morphological evidence (e. g. Ackery et al., 1999) and molecular data (e. g. Walberg et al., 2005; Heikkilä, M. et al., 2011). Unique synapomorphies of this family at least include several characters: 1) Antennae at least twice the width of the scape apart; 2) Eyes with a complete marginal ring of reduced ommatidial facets; 3) Third axillary sclerite of forewing base Y-shaped, indented anteriorly.

Ackery et al. (1999) recognize six subfamilies in the family: Coeliadinae, Pyrrhopyginae, Pyrginae, Heteropterinae, Trapezitinae, and Hesperinae, but they also pointed out that Pyrginae and Hesperinae may be paraphyletic. The Coeliadinae contained about 75 medium-sized species confined to the Old World tropics, in about 8 genera. The Pyrrhopyginae is basically Neotropical, with about 150 species in 20 genera. Pyrginae is comprised about 1000 species in 160 genera, distributed worldwide. Heteropterinae contains about 150 species in 16 genera, with an usual distribution in Afrotropic, Palaearctic, Nearctic, and Neotropic. Trapezitinae is represented by about 60 species in 16 genera, confined in the Australian Region. Hesperinae is the largest group in Hesperidae, including more than 2000 species in about 325 genera, with a worldwide distribution. The New World giant skippers are sometimes regarded as a distinct family Megathymidae.

A total of XX species of skippers thrive in Taiwan and its associated islands, with X additional species of uncertain sources or accidental stray from areas outside of Taiwan.

弄蝶科是弄蝶總科裡唯一代表類群，約有 3500 種，分佈於全世界(Ackery et al. , 1999)。本科成員英文俗名慣用“skippers 一詞(有「跳躍者」之意)”，源自其疾飛、不規律的飛行方式。有些學者將本科排除在「蝴蝶」之外(例如 D’ Abrera, 198X)，然而 Heikkilä et al. (2011)的分子親緣關係研究認為弄蝶科是除了鳳蝶科以外其他所有蝴蝶的姐妹群。

弄蝶科作為一個單系群，同時受到形態證據(例如 Ackery et al. , 1999)及分子資料(例如 Walberg et al. , 2005；Heikkilä et al. , 2011)的支持。本科獨有的共衍徵至少包括下列特徵：1)觸角基明顯分離；2)複眼外緣有一環退化小眼；3)前翅

基部第三腋骨呈 Y 型，前端內凹。

Ackery et al. (1999)將本科分為六個亞科：大弄蝶亞科、美洲大弄蝶亞科、花弄蝶亞科、鏈弄蝶亞科、澳洲弄蝶亞科和弄蝶亞科，但他們同時也指出花弄蝶亞科及弄蝶亞科可能是並系群。大弄蝶亞科包括大約 8 個屬約 75 種體型中庸的種類，僅分佈在舊世界熱帶地區。美洲大弄蝶亞科基本上分佈於新熱帶區，約有 20 屬 150 種。花弄蝶亞科包括 160 屬約 1000 種，分佈於全世界。鏈弄蝶亞科包括 16 屬約 1000 種，分佈於非洲熱帶、舊北區、新北區及新熱帶地區。澳洲弄蝶亞科約有 16 屬 60 種，僅分佈於澳洲地區。弄蝶亞科是弄蝶科中最大的一群，約有 325 屬，超過 2000 種，廣泛分佈於全世界。新世界的巨弄蝶有時候被視為一獨立之巨弄蝶科(Megathymidae)。

臺灣(含離、外島地區)共有 xx 種弄蝶棲息，另有 x 種來源不確定或從其他地區偶發進入臺灣的種類。

Subfamily COELIADINAE, Evans, [1937]

Type genus: *Coeliades* Hübner, 1818

Ackery et al. (1999) stated that the subfamily is defined by a single, unique, and universal character: third segment of labial palpus long, slender, awl-like, perpendicular to erect second segment. Secondary sexual characters in the subfamily comprise bands and stigmata on wing uppersides and tibial hair tufts.

Genus *Burara* Swinhoe, 1893

The members of this subfamily are mainly tropical in the Old World, but a few species are found in temperate zones in East Asia. The host plants of the subfamily are dicotyledons.

Type species: *Ismene vasutana* Moore, 1866

Diagnostic characters include the followings: 1) Wings broad, “quadrate” in shape for spread specimens; 2) sexual dimorphism prominent; 3) crepuscular in activity (Eliot, 1992).

In Taiwan, a total of 9 species in 4 genera are known.

大弄蝶亞科

根據 Ackery et al. (1999)，定義大弄蝶亞科的唯一通用特徵為下唇鬚第三節纖細、錐狀、直立並與第二節垂直。本亞科的第二性徵包括翅背面的性標、性斑及脛節毛叢。

Members of this genus are usually included in the genus *Bibasis* Moore [1881], which possesses narrow wings, sexes alike, and diurnal in activity. Chiba (2009) advocates separation of the genus from *Bibasis*, following suggestion by Eliot (1992).

本亞科的成員主要分佈在舊世界熱帶，但有一些種類發現於東亞溫帶地區。寄主植物為雙子葉植物。

Chiba (2009) recognized 14 species. In Taiwan, one species occurs.

Burara jaina (Moore, [1866]) 橙翅傘弄蝶/鸞褐弄蝶

Ismene jaina Moore, [1866]: Proceedings of the Zoological Society of London 1865 (3): 782 (Type locality: “Darjeeling”)

Ismene jaina vasundhara Fruhstorfer, 1911: Deutsche entomologische Zeitschrift Iris 25(5):

59. (Type locality: “Assam”)

Ssp. *formosana* (Fruhstorfer, 1911)

Ismene jaina formosana Fruhstorfer, 1911: Deutsche entomologische Zeitschrift Iris 25(5):

59. (Type locality: “Formosa”)

Figs. XX – XX, XXX, XXX.

Specimens examined:

TAIWAN: NEW TAIPEI CITY [TAIPEI Co.]: 1 ♀, Xindian, Sikanshui, 22. XI. 2008, reared from *Hiptage benghalensis*, emgd. 5. I. 2009, HSU 08L6, (Y. F. Hsu & C. H. Yen), 1 ♀, Wulai, Jiajiuliao, 14. II. 2003, reared from *Hiptage benghalensis*, emgd. 26. III. 2003, HSU 03B15, (H. S. Chuen & F. Z. Lin). HUALIEN Co.: 1 ♂, Xiulin, Shikongzai, 60m, 25. IV. 2008, reared from *Hiptage benghalensis*, emgd. 27. V. 2008, HSU 08D18 (L. H. Wang).

Description.

Adult – Forewing length 19 – 27 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Male. Head hairy, brown. Antennae with apiculus prominent, hooked, scalings brown on outer surface, creamy yellow on inner surface; a naked area present on inner surface distad. Proboscis brown. Labial palpus erect, with 3rd segment porrect; 1st and 2nd segments hairy, creamy yellow, with an orange stripe and a brown stripe distally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown hairs. Abdomen brown, with narrow, longitudinal, orange band medio-ventrally. Legs creamy yellow mixed with orange. Forewing with costa, dorsum nearly straight; termen somewhat concave. Hindwing slightly lobed at tornus. Wing uppersides bearing brown hairs proximally, with ground color brown, decorated with faint, pale markings. Wing undersides ground color brown, with a prominent creamy white patch posteriad, a creamy yellow discal band and a creamy white spot at end of discoidal end on forewing; narrow linear stripes in cells of wing undersides. Fringe brown except orange around hindwing tornus. A patch of black sexual brand present in cell Cu cells. Female: Body and wing patterns similar to those of male, but creamy white markings on forewing undersides less extensive. No sexual brand on forewing upperside.

形態記述

Male genitalia (Figs. XXX – XXX) – Tegumen broad, with uncus as bifid lobe forming shallow V-shaped cleft medially. Gathos broad, with a patch of sclerotized area armed with minute spines posteriad. Saccus short. Valva simple, attenuated posteriorly into a single horn. Sacculus enlarged proximally. Phallus up-curved, with phallobase shorter than aedeagus. Juxa as a V-shaped sclerite.

雄交尾器 –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval, with signum as prominent, elongate, sclerotized band bearing minute spines. Ductus bursae membranous, with caudal end forming a sclerotized tube. Sterigma forming a heaving sclerotized area connecting ductus bursae, bearing a pair of lobes posteriad. Anal papillae setose. Posterior apophyses elongate, straight, with anterior ends enlarged. Anterior apophyses short, flattened.

雌交尾器 –

Global distribution.

Himalayas, Northeast and South India, Indochina, Borneo, South China, and Taiwan (Hsu, 2013).

世界分布

喜馬拉雅地區、印度東北部及南部、中南半島、婆羅洲、華南及台灣。

Distribution in Taiwan.

Lowland to moderate elevations (Hsu, 2013).

臺灣分布

低至中海拔地區。

Larval Host plant(s).

Malpighiaceae: *Hiptage benghalensis* (Hsu, 2013).

寄主植物

黃蘗花科：猿尾藤。

Biology.

This species is known to be multivoltine in occurrence overwintering as young larva (Hsu, 1999).

生物學

本種是一年多代物種，以幼蟲態度冬。

Genus *Hasora* Moore, [1881]

Type species: *Goniloba* Moore, 1858

Diagnostic characters include the followings: 1) Forewing apex pointed; 2) hindwing lobate; 3) Wing uppersides dark brown, with pale hyaline spots prominent on forewings in most species of females; 4) Sexual brands usually in males (Eliot, 1992; Chiba, 2009).

Chiba (2009) recognized 29 species.

In Taiwan, five species occur.

***Hasora chromus* (Cramer, [1780])(尖翅絨弄蝶/琉球絨毛弄蝶/沖繩絨毛弄蝶)**

Papilio chromus Cramer, [1780]: De uitlandsche kapellen 3 (23-24): 163, pl. 284, fig. E (Type locality: “Coromandel”)

Papilio alexis Fabricius, 1775 Systema Entomologiae: 533 (preocc.)

Ismene contempta Plötz, [1883]: Entomologische Zeitung 45 (1-3): 56 (Type locality: “Cape York”)

Ismene lucescens Lucas, 1900: Proceedings of the Royal Society of Queensland 15: 138, (Type locality: Cairns)

Hasora attenuata Mabille, 1904 in Wytsman, Genera Insectorum 17 (B): 86 (preocc.)

Hasora alexis ganapata Fruhstorfer, 1911: Deutsche entomologische Zeitschrift Iris 25 (5): 72 (Type locality: “Dutch New Guinea”)

Hasora malayana acacra Fruhstorfer, 1911: Deutsche entomologische Zeitschrift Iris: 73 (Type locality: “Sula”)

Ssp. *chromus* (Cramer, [1780])

Figs. XX – XX, XXX, XXX.

Specimens examined:

TAIWAN: TAITUNG Co. [=TAIDONG]: 1 ♂, Lanyu, Sidaogou, 29. III. 2010 (Y. F. Hsu), 1 ♂, 3 ♀, same locality, 18/20. III. 2006 (Y. F. Hsu & H. C. Huang), 1 ♂, same locality, 15. X. 2006, reared from *Pongamia pinnata*, emgd. 30. X. 2006, HSU 06K22, (Y. F. Hsu, H. C. Huang & Y. C. Hsu), 1 ♂, Lanyu, 28. II. 2010. (J. H. Lin, HSU's LAB);
TAIPEI CITY: 5 ♂, 2 ♀, 228 Memorial Park, collecting date unknown, emgd. 1/12. XII. 1987. CHANGHUA Co [=Zhanghua].: 1 ♂, 2 ♀, Changhua, 22. XII. 1995, reared from *Pongamia pinnata*, emgd. 25/3. XIII. 1995/1996, HSU 95M13, (Y. F. Hsu).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

***Hasora mixta* (Mabille, 1876) (南風絨弄蝶)**

Ismene mixta Mabille, 1876: Annales de la Société entomologique de France 5(6): 267. (Type locality: “Manille”)

Ismene phileta (Plötz, [1883]) Entomologische Zeitung 45 (1-3): 56 (Type locality: “Philippinen”)

Ssp. *limata* Hsu & Huang, 2008

Hasora anura taiwana Hsu, Tsukiyama & Chiba, 2005: Zoological Studies 47: 223, Figs. 1, 2, 5, 6 (Type locality: TAIWAN: TAIDONG Co., Lanyu, Sidougou)

Figs. XX – XX, XXX, XXX.

Specimens examined:

TAIWAN: TAIDONG Co. [=TAITUNG Co.]: 1 ♂, Lanyu, 21/23. IX. 2008 (H. C. Huang & C. H. Lin jr); 1 ♀, same locality, same collecting date (C. H. Lin jr & C. L. Huang), 2 ♂, 5 ♀, Lanyu, Sidaogou, 18/20. III. 2006, reared from *Derris oblonga*, emgd. 12/13. IV. 2006, HSU 06C16, (paratypes), (Y. F. Hsu & H. C. Huang); 1 ♂, same locality, same collecting date (paratype) (Y. F. Hsu & H. C. Huang) (genitalia YFH1402); 1 ♂, same locality, 18. IV. 2006, (paratype), (Y. F. Hsu), (genitalia YFH1405); 6 ♂, 9 ♀, same locality, 3/5. III. 2007, reared from *Paraderris piscatoria* (= *Derris oblonga*), emgd. 1/14. IV. 2007, 07C3, (paratype), (Y. F. Hsu & H. C. Huang); 3 ♂, 3 ♀, same locality, 17. III. 2007, reared from *Paraderris piscatoria* (= *Derris oblonga*), emgd. 17/26. IV. 2007, 07C14 (paratype), (Y. F. Hsu.); 1 ♀, same locality, 10/11. IV. 2007, reared from *Paraderris piscatoria* (= *Derris oblonga*), emgd. 18. V. 2007, 07D9, (paratype), (Y. F. Hsu, HSU's LAB); 1 ♂, same locality, 28. III. 2010, reared from *Paraderris piscatoria* (= *Derris oblonga*), emgd. 1. IV. 2010, HSU 10C47 (Y. F. Hs & J. H. Lin); 2 ♂, same locality, 10. III. 2009, reared from *Paraderris piscatoria* (= *Derris oblonga*), emgd. 9/14. IV. 2009, HSU 09D8 (Y. F. Hsu, HSU's LAB).

Description.

Adult – Forewing length 19 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown. Antennae with apiculus prominent, hooked, brown mixed with creamy yellow scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy yellow; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown hairs dorsally, grayish brown ventrally. Abdomen brown dorally, pale yellowish brown ventrally. Legs creamy yellow. Forewing triangular, costa and dorsum straight, termen slightly concave near apex. Hindwing ovate, lobed at tornus. Wing uppersides bearing yellowish brown hairs proximally, with surface brown. Wing undersides ground color brown, overlaid with bluish purple scalings; a dark patch present at tornus of hindwing. A creamy yellow dash present in cell CuA2. A dark brown, slightly curved, narrow linear sexual brand on forewing upperside. Fringe pale brown. Female: Body and general wing patterns similar to those of male, but prominent creamy yellow, semi-transparent spot in cell M3, CuA1 and distal area of discoidal cell in forewing; no sexual brand on forewing.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Sundaland, Philippines, Sulawesi, Moluccas, Taiwan. (Hsu & Huang, 2008).

世界分布

Distribution in Taiwan.

Restricted to Lanyu, Taidong (Hsu & Huang, 2008).

臺灣分布

Larval Host plant(s).

Fabaceae: *Paraderis ?piscatoria* (Hsu & Huang, 2008).

寄主植物

Biology.

Multivoltine (Hsu & Huang, 2008).

生物學

一年多代物種。

***Hasora anura* de Nicéville, 1889 (無尾絨弄蝶/無尾絨毛弄蝶)**

Hasora anura de Nicéville, 1889: The Journal of the Bombay Natural History Society 4 (3): 170, pl. B, f. 1, 5 (Type locality: “Sikkim, Khasi Hills”)

Ssp. *taiwana* Hsu, Tsukiyama & Chiba, 2005

Hasora anura taiwana Hsu, Tsukiyama & Chiba, 2005: Zoological Studies 44: 202, Figs. 2, 3, 10, 11. (Type locality: Taiwan: Taizhong Co., Heping, Anmashan, 2000 m)

Figs. XX – XX, XXX, XXX.

Specimens examined:

TAIWAN: NANTOU Co.: 8 ♂, 5 ♀, Yuchi, Lianhuachi, 700m, 13. V. 2004, reared from *Ormosia formosana*, emgd. 31/9. V/VI. 2004, HSU 04E25, (Y. F. Hsu) (paratypes).

Description.

Adult – Forewing length 19 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown. Antennae with apiculus prominent, hooked, brown mixed with creamy yellow scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy yellow; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown hairs dorsally, grayish brown ventrally. Abdomen brown. Legs creamy yellow. Forewing triangular, apex obtuse, margins straight. Hindwing ovate, slightly lobed at tornus. Wing uppersides bearing yellowish brown hairs proximally, with surface brown. A few small, creamy yellow spots present subapically on forewing. Wing undersides ground color brown, mottled with pale scalings; a dark patch present at tornus of hindwing. A creamy yellow dash present in cell CuA2. A creamy yellow dot at distal end of discoidal cell. Fringe pale brown. Female: Body and general wing patterns similar to those of male, but prominent creamy yellow, semi-transparent spot in cell M3, CuA1 and distal area of discoidal cell in forewing. A pale creamy yellow patch present along dorsum of forewing underside.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Himalayas, Northeast India, Northern India, West to East China, Taiwan (Hsu, Tsukiyama & Chiba, 2005).

Sundaland, Philippines, Sulawesi, Moluccas, Taiwan. (HsTsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Montane habitats from moderate to higher elevations in central Taiwan (Hsu, Tsukiyama & Chiba, 2005).

臺灣分布

Larval Host plant(s).

Fabaceae: *Ormosia formosana* (Uchida 1988, 1991, 1995; Igarashi and Fukuda 2000).

寄主植物

Biology.

Univoltine, diapause in winter as adults (Hsu, Tsukiyama & Chiba, 2005).

生物學

一年一世代物種。

Remarks.

後記

Hasora taminatus (Hübner, 1818) (圓翅絨弄蝶/台灣絨毛弄蝶)

Coeliades taminatus Hübner, 1818 Zuträge zur Sammlung exotischer Schmettlinge 1: 31, fig. 193-194. (Type locality: "Surinam" [error, S.India])

Ssp. *vairacana* Fruhstorfer, 1911

Hasora alexis vairacana Fruhstorfer, 1911: Deutsche entomologische Zeitschrift Iris 25 (5): 70. (Type locality: Formosa, Chip-Chip)

Figs. XX – XX, XXX, XXX.

Specimens examined:

TAIWAN: "TAOYUAN City" [TAOYUAN Co.]: 1 ♂, Fuxing, Gaoyi, 26. IV. 1986, (HSU), 1 ♂, Fuxing, Sule, 28. IV. 1997, reared from *Millettia pachycarpa*, emgd. 24. V. 1997, HSU 97D78, (Y. F. Hsu & J. J. Young). TAINAN CITY [TAINAN Co.]: 1 ♀, Baihe, Zhentoushan, 500m, 15. X. 2002 (Y. F. Hsu). HUALIEN Co.: 1 ♀, Xiulin, W. peak of Panshishan, 3300m, 26. VII. 2003 (C. L. Huang). NANTOU Co.: 1 ♀, Renai, Shimenshan, 3200m, 20. VII. 2006 (L. H. Wang). TAIDONG [TAITUNG Co.]: 1 ♂, Jinfeng, Bilu Spring, 9. XII. 2000 (C. C. Lu), 1 ♀, Yangping, Hongye, 500m, 4. VIII. 2009 (C. H. Lin jr.), 1 ♀, Donghe, Donghe Farm, 350m, 16. X. 2007, (Y. F. Hsu). PINGDONG Co. [PINGTUNG Co.]: 1 ♀, Wutai, Old Dawu- Bayouxi, 500-900m, 17. III. 2009 (Y. F. Hsu & H. C. Huang), 1 ♀, Shizi, Shuangliu, 200m, 10 VI. 2007 (Y. F. Hsu).

Description.

Adult – Forewing length 16 – 22 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, apex brown, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A black, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male,

but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid.

Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Himalayas, India, Indo China, Southeast Asia, West and South China, Taiwan. (Hsu, 2013).

世界分布

Distribution in Taiwan.

Montane habitats from lowland to moderate elevations (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Milletia pachycarpa*, *Derris laxiflora*. (Hsu, 2013).

寄主植物

Biology.

Multivoltine in occurrence (Hsu, 2013)).

生物學

一年多代物種。

***Hasora badra* (Moore, [1858]) (鐵色絨弄蝶/鐵色絨毛弄蝶)**

Coeliades taminatus Hübner, 1818 *Zuträge zur Sammlung exotischer Schmettlinge* 1: 31, fig. 193-194. (Type locality: "Surinam" [error, S.India])

Ssp. *vairacana* Fruhstorfer, 1911

Hasora alexis vairacana Fruhstorfer, 1911: *Deutsche entomologische Zeitschrift Iris* 25 (5): 70. (Type locality: Formosa, "Chip-Chip" [= Jijì])

Figs. XX – XX, XXX, XXX.

Specimens examined:

TAIWAN: "TAOYUAN City" [TAOYUAN Co.]: 1 ♂, Fuxing, Gaoyi, 26. IV. 1986, (HSU), 1 ♂, Fuxing, Sule, 28. IV. 1997, reared from *Millettia pachycarpa*, emgd. 24. V. 1997, HSU 97D78, (Y. F. Hsu & J. J. Young). TAINAN CITY [TAINAN Co.]: 1 ♀, Baihe, Zhentoushan, 500m, 15. X. 2002 (Y. F. Hsu). HUALIEN Co.: 1 ♀, Xiulin, W. peak of Panshishan, 3300m, 26. VII. 2003 (C. L. Huang). NANTOU Co.: 1 ♀, Renai, Shimenshan, 3200m, 20. VII. 2006 (L. H. Wang). TAIDONG [TAITUNG Co.]: 1 ♂, Jinfeng, Bilu Spring, 9. XII. 2000 (C. C. Lu), 1 ♀, Yangping, Hongye, 500m, 4. VIII. 2009 (C. H. Lin jr.), 1 ♀, Donghe, Donghe Farm, 350m, 16. X. 2007, (Y. F. Hsu). PINGDONG Co. [PINGTUNG Co.]: 1 ♀, Wutai, Old Dawu- Bayouxi, 500-900m, 17. III. 2009 (Y. F. Hsu & H. C. Huang), 1 ♀, Shizi, Shuangliu, 200m, 10 VI. 2007 (Y. F. Hsu).

Description.

Adult – Forewing length 20 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown. Antennae with apiculus prominent, hooked, brown mixed with creamy yellow scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy yellow; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown hairs dorsally, grayish brown ventrally. Abdomen brown dorsally, brown banded with creamy white ventrally. Legs creamy yellow. Forewing triangular, apex obtuse, costa and dorsum straight, termen slightly concave near apex. Hindwing ovate, lobed at tornus. Wing uppersides bearing yellowish brown hairs proximally, with surface brown. Wing undersides ground color brown tinged with purple, mottled with pale scalings; a dark patch present at tornus of hindwing. A white dash present in cell CuA2. A white dot at distal end of discoidal cell. A creamy yellow patch present along dorsum of forewing underside. Fringe brown. Female: Body and general wing patterns similar to those of male, but prominent creamy yellow, semi-transparent spot in cell M3, CuA1 and distal area of discoidal cell in forewing. A few small, creamy yellow spots present subapically on forewing.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

South India, Sri Lanka, Himalayas, Indo China, Indonesia, Palawan, South China, Taiwan; recently immigrating to Iriomoto, Japan (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland to moderate elevations (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Milletia pachycarpa*, *Derris laxiflora*. (Hsu, 2013).

寄主植物

Biology.

Multivoltine in occurrence (Hsu, 2013).

生物學

一年多代物種。

Genus *Badamia* Moore, [1881]

Type species: *Papilio exclamationis* (Fabricius, 1775)

Diagnostic characters include the followings: 1) Wings very elongate; 2) hindwing caudate at 1+2A, strongly excavate between CuA2 and 1+2A; 3) male hindtibia bearing a pencil of stiff bristles in a groove between metathorax and abdomen (Eliot, 1992).

Two species are included in the genus (Eliot, 1992; Bascombe et al., 1999; Chiba 2009).

In Taiwan, one species occurs.

Badamia exclamationis (Fabricius, 1775) (長翅弄蝶/淡綠弄蝶)

Papilio exclamationis Fabricius, 1775: Systema Entomologiae: 530, no. 373 (Type locality: India)

Papilio ladon Cramer, [1780]: De uitlandsche kapellen 3 (23-24): 164, pl. 284, f. G (preocc.)

Hesperia ericus Fabricius, 1798 Systema Entomologiae (Suppl.): 432. (Type locality: “India Orientali”)

Calpodes forulus Hübner, [1819] Verzeichniss bekannter Schmettlinge (7): 107, n. 1147 (Type locality: Java)

Ismene thymbron Felder, 1860: Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften 40 (11): 461 (Type locality: Amboina)

Hasora anura de Nicéville, 1889: The Journal of the Bombay Natural History Society 4 (3): 170, pl. B, f. 1, 5 (Type locality: “Sikkim, Khasi Hills”)

Ssp. exclamationis (Fabricius, 1775)

Figs. XX – XX, XXX, XXX.

Specimens examined:

TAIWAN: NANTOU Co.: 8 ♂, 5 ♀, Yuchi, Lianhuachi, 700m, 13. V. 2004, reared from *Ormosia formosana*, emgd. 31/9. V/VI. 2004, HSU 04E25, (Y. F. Hsu) (paratypes).

Description.

Adult – Forewing length 19 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, creamy white with dark brown markings. Antennae with apiculus prominent, hooked, brown mixed with creamy yellow scalings ventrad. Proboscis dark brown. Labial palpus correct, 1st and 2nd segments hairy, creamy white; 3rd segment minute, rod-like, smooth and brown. Thorax covered by pale brown tinged with green hairs. Abdomen dark brown banded with creamy white e. Legs creamy yellow or creamy white. Forewing elongate, with termen concave. Hindwing strongly excavate between CuA2 and 1+2A. Wing uppersides bearing pale yellowish brown tinged with green hairs proximally, with surface brown. A few small, creamy yellow, semi-transparent spots in cell M3, CuA1 and distal area of discoidal cell in forewing. Wing undersides ground color pale grayish brown; a dark patch present at tornus of hindwing. A faint, creamy yellow dash present in cell CuA2. A pale creamy yellow patch present along dorsum of forewing underside. Fringe brown but creamy yellow at tornus. Female: Body and general wing patterns similar to those of male, but creamy yellow spots in cell M3, CuA1 and distal area of discoidal cell in forewing much more prominent.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Widespread throughout the Oriental and Australian Regions, also western Pacifics. (Chiba, 2008).

世界分布

Distribution in Taiwan.

Lowland to moderate elevations (Hsu, 2013).

臺灣分布

Larval Host plant(s).

Malpighiaceae: *Hiptage benghalensis* (Hsu, 2013).

寄主植物

Biology.

Multivoltine in occurrence (Hsu, 2013).

生物學

一年多代物種。

Remarks.

後記

Genus *Choaspes* Moore, [1881]

Type species: *Hesperia benjaminii* Guérin-Méneville, 1843

Diagnostic characters include the followings: 1) Body and at least the basal areas of wing undersides greenish green, with tornus of hindwing yellow or orange; 2) hind tibia bearing erectile hair tuft fitting into a thoracic pouch; 3) a long recumbent hair pencil present on hind tibia, associated with abdominal groove filled with shining scales. (Eliot, 1992).

Chiba (2009) recognized 8 species, but some subspecific taxa in his work have been given specific status by other works.

In Taiwan, two species occur.

Choaspes benjaminii (Guérin-Méneville, 1843) (綠弄蝶/大綠弄蝶)

Hesperia (Thymele) Benjaminii Guérin-Méneville, 1843: in Delessert, Souvenirs d'un voyage dans l'Inde exécuté de 1834 à 1839 (2): 79, pl. 22, f. 2. (Type locality: Neelgheries" [=Nilgiris, S.India])

Ssp. formosana (Fruhstorfer, 1911)

Rhopalocampta benjaminii formosana Fruhstorfer, 1911: Deutsche entomologische Zeitschrift Iris 25(6): 78, (Type locality: "Formosa, Chip-Chip [= Jiji]")

Figs. XX – XX, XXX, XXX.

Specimens examined:

TAIWAN: TAIPEI CITY: 1 ♀, Yangmingshan, 14. V. 1987, (Y. F. Hsu), 1 ♂, Nangang, Academia Sinica, 25. II. 2015, (C. W. Huang)(genitalia preparation JYL236). NEW TAIPEI City [TAIPEI Co.]: 1 ♂, Shiding, Ergeshan, 5. VIII. 2008 (N. Y. Tsai), 1 ♀, Sanzhi, Sanbanqiao, 17. VI. 2016, (J. Y. Liang)(genitalia preparation JYL235), 1 ♂,

Wulai, Fushan, 16. VI. 2016, (C. W. Huang), (genitalia preparation JYL237). TAIKUNG Co. [=TAITUNG Co.]: 1 ♂, Yanping, Lijia Trail, 1100m, 9. IX. 1999 (Y. F. Hsu). TAOYUAN City [TAOYUAN Co.]: 2 ♂, Fuxing, Daman, 6. VIII. 1987 (Y. F. Hsu), 1 ♂, Fuxing, Sule, 26. VI. 21. 1987 (Y. F. Hsu).

Description.

Adult - Forewing length XX - XX mm. Male (Figs. XX - XX; XX - XX; XX - XX): Male. Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown in color. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, orange with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown, with narrow, longitudinal, orange band medio-ventrally. Legs brown. Forewing with costa, dorsum nearly straight; termen somewhat concave. Hindwing slightly lobed at tornus. Wing uppersides bearing brown hairs proximally, with surface of bluish green sheen. Wing undersides ground color green, glossy, with veins darkened. A patch of orange with dark brown spots around tornus of hindwing. Fringe brown except orange around hindwing tornus. Female: Body and wing patterns similar to those of male, but wing uppersides with ground color brown, with proximal hairs bluish green.

形態記述

Male genitalia (Figs. XXX - XXX) - Tegumen broad, with uncus elongate, tapering caudad, slightly down-curved. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 -

Female genitalia (Figs. XXX - XXX) - Corpus bursae oval. Ductus bursae membranous. Sterigma forming a sclerotized, wrinkled dome. Signum as a wrinkled wall with a patch of minute spines. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 -

Global distribution.

Himalayas, Northeast and South India, Malay Peninsula, Indochina, Sumatra, West to East China, and Taiwan (Yata, 1985).

世界分布

喜馬拉雅地區東部、印度東北部及南部、斯里蘭卡、馬來半島、中南半島、蘇門答臘、日本、華西至華東及台灣。

Distribution in Taiwan.

Lowland to moderate elevations (Hsu, 2013).

臺灣分布

Larval Host plant(s).

Sabiaceae: *Meliosma pinnata*, *M. squamulata*, *M. simplicifolia*, *M. callicarpifolia*. (Hsu, 2013).

寄主植物

清風藤科：。

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

Some authors regard ssp. *formosana* as a synonym of ssp. *japonica* Murray, 1875 (e. g. Tsukiyama et al. 1997).

後記

Choaspes xanthopogon (Kollar, [1844]) (褐翅綠弄蝶)

Hesperia xanthopogon Kollar, [1844] in Hügel, Kaschmir und das Reich der Siek 4: 453, pl. 18, (Type locality: “Himaleya” [Himalaya])

Choaspes similis Evans, 1932 Identification of Indian Butterflies (edn. 2): 320, 321 (Type locality: “Assam”)

Ssp. *chrysopterus* Hsu, 1988

Choaspes xanthopogon chrysopterus Hsu, 1988: Bulletin of the Institute of Zoology, Academia Sinica 27: 237, figs.3-6. 25(6): 78, (Type locality: Mt.Lala, Taoyuan, Taiwan)

Figs. XX – XX, XXX, XXX.

Specimens examined:

TAIWAN: NEW TAIPEI CITY [TAIPEI Co.]: 2 ♀, Wulai, Datongshan, 13. IV. 2007, reared from *Sabia swinhoei*, emgd. 19/26. V. 2007, HSU 07D15, (L. H. Wang), 1 ♂, 2 ♀, Wulai, Badaoershan, 26. IV. 2007, reared from *Sabia swinhoei*, emgd. 25/26/29. V. 2007, HSU 07D25 (L. H. Wang), 1 ♂, Sanxia, Beichatianshan, 1500/1600m, 7/10.VI. 2001 (Y. T. Lo), 1 ♂, Shiding, Ergeshan, 1. IV. 2003, reared from *Sabia swinhoei*, emgd. 5. V. 2003, HSU 03D1, (L. W. Wu). YILAN Co.: 1 ♂, Datong, Siyuan, 27. VII. 2007, (Y. F. Hsu). TAOYUAN City [TAOYUAN Co.]: 1 ♀, Fuxing, Lalashan, 9. VII. 1997, reared from *Sabia transarisanensis*, emgd. 18. VIII. 1997, HSU 97G4, (Y. F. Hsu & C. Y. Hung)

Description.

Adult – Forewing length XX – XX mm. Male (Figs. XX – XX; XX – XX; XX – XX): Male. Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked,

brown in color. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, orange with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown, with narrow, longitudinal, orange band medio-ventrally. Legs brown. Forewing with costa, dorsum nearly straight; termen somewhat concave. Hindwing slightly lobed at tornus. Wing uppersides bearing green hairs proximally, with surface brown. Wing undersides ground color green, glossy, with veins darkened. A patch of orange with dark brown spots around tornus of hindwing. Fringe brown except orange around hindwing tornus. Female: Body and wing patterns similar to those of male, but hairs on body and wings blue instead of green.

形態記述

Male genitalia (Figs. XXX – XXX) – Tegumen broad, with uncus straight; distal end of uncus blunt. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe with dorsal edge thickened, bearing minute teeth; ampulla lobe-like, with caudal end truncated. Costa extending into a sheet with serrate margin. Sacculus forming a flattened band. Phallus short, stout, with phallobase longer than aedeagus. Juxta as a narrow.

雄交尾器 –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Lamella antevaginalis forming prominent, sclerotized, hairy, wrinkled structure; lamella postvaginalis as a winged sclerite with medial ditch. Anal papillae setose. Posterior apophyses elongate, narrow, abruptly bent halfway.

雌交尾器 –

Global distribution.

Himalayas, Northeast India, northern Indochina, West to Southwest China, and Taiwan (Hsu, 2013).

世界分布

喜馬拉雅地區東部、印度東北部、中南半島、婆羅洲、蘇門答臘、爪哇、菲律賓、華南、華東及台灣。

Distribution in Taiwan.

Montane habitats from low to moderate elevations

臺灣分布

承名亞種見於金門。Ssp. *curasena* 見於台灣本島。

Larval Host plant(s).

Sabiaceae: *Sabia transarisanensis* and *S. swinhoei*. (Hsu, 2013).

寄主植物

清風藤科：。

Biology.

Bivoltine or more generations per year in occurrence (Hsu, 2013).

生物學

一年至少有兩代。

Remarks.

Some authors regard *chrysopterus* Hsu, 1988 as a synonym of the nominotypical subspecies (e. g. Tsukiyama, 1992).

後記

Genus *Abraximorpha* Elwes & Edwards, 1897

Type species: *Pterygospidea davidii* Mabille, 1876

Diagnostic characters include the followings: 1) wings white with dark brown spots on wings; 2) a white band or patch present on hindwing; 4) male with recumbent metatibial hair tufts; 5) female with anal hair tuft.

Only one species remained in the genus after Wang et al (2016) removed two species into a new genus called *Albiphasma* Huang, Chiba, Wang and Fang, 2016. The sole species in the genus is distributed in northern part of the Oriental region.

The sole species occurs in Taiwan.

Abraximorpha davidii Mabille, 1876 (白弄蝶)

Pterygospidea davidii Mabille, 1876; Bull. Soc. ent. Fr. (5) 6: liv; TL: Mou-pin

Ssp. *ermasis* Fruhstorfer, 1914

Celaenorrhinus davidii ermasis Fruhstorfer, 1914; Ent. Rundschau 31 (3): 18; TL: Formosa, Alikang

Specimens examined:

XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♀, Wulai, 16. IX. 1981 (Y. F. Hsu); 1 ♂, Wulai, Jiajuliao, 150m, 9. VI. 2008 (Y. F. Hsu). TAIPEI CITY: 1 ♀, Songshan, Hushan, 8. VI. 2010 (C. H. Lin); 1 ♂, same locality, 8. IX. 2010 (C. L. Huang). " TAIZHONG CITY [= TAICHUNG CITY/ TAICHUNG Co.]: 1 ♂, 1 ♀, Heping, Anmashan, 1400m, 17. IV. 1997, reared from *Rubus rolfei*, emgd. 19/20. V. 1997, HSU 97D52 (C. C. Lu& L. L. Yang); 1 ♂, 1 ♀, Heping, Anmashan, 17. IV. 1997, reared from *Rubus formosensis*, emgd. 10. V. 1997, HSU 97D52 (Y. F. Hsu); 2 ♂, same locality, 25. IV. 1997, reared from *Rubus rolfei*, emgd. 19. V. 1997, HSU 97D66 (Y. F. Hsu); 1 ♀, same locality, 25. IV. 1997, reared from *Rubus formosensis*, emgd. 28. V. 1997, HSU 97D66 (C. C. Lu& C. Y. Hung). PINGDONG [= PINGTUNG] Co.: 1 ♀, Wutai, Wutoushan, 1200/1300m, 8. IX. 1998, reared from *Rubus fraxinifoliolus*, emgd. 25. IX. 1998, HSU 98J16 (Y. F. Hsu). JIAYI [= CHIAYI] Co.: 1 ♂, Zhuqi/ Alishan, Shizhou/

Dabang, 900/1000m, 25. IX. 2010 (Y. F. Hsu). HUALIAN [= HUALIEN] Co.: 1 ♂ ,
Lungchien to Lunghsi, 10. VII. 1991 (Y. F. Hsu).

Description.

Adult - Forewing length 17 - 24 mm. Male (Figs. XX - XX; XX - XX; XX - XX):
Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown
mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect,
1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment
minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs.
Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing
triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at
tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a
dark patch present proximally on forewing. Wing undersides ground color pale brown; a
dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe
brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing
upperside. Female: Body and wing patterns similar to those of male, but creamy white,
semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without
dark area; no sexual brand.

Male genitalia (Figs. XXX - XXX) - Tegumen narrowed caudad, with uncus bifid.
Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe
produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla
lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase
slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX - XXX) -

Female genitalia (Figs. XXX - XXX) - Corpus bursae oval. Ductus bursae
membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming
a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX - XXX) -

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North
Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan.
(Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Genus *Aeromachus* de Nicéville, 1890

Type species: *Thanaos stigmata* Moore, 1878

Diagnostic characters include the followings: 1) Wings brown, with postdiscal spots arranged into an arc in some species; 2) small or very small in body size; 3) antennal apiculus short to very short, sometimes hooked; 4) sexual brands present on forewing upperside in some species.

About a dozen species are known, distributed from eastern Palearctic and Oriental regions.

Two species occur in Taiwan.

Aeromachus inachus (Ménétriés, 1859)(弧弄蝶星褐弄蝶/河伯鏢弄蝶)

inachus (Ménétriés, 1859); Bull. phys-math. Acad. Sci. St. Pétersb. 17 (14): 217; TL: S.Amur, near delta of Songari River

Ssp. *formosana* Matsumura, 1931

Aeromachus inachus f. *formosanus* Matsumura, 1931; Insecta Matsumurana 6 (1-2): 44; TL: Formosa, Naihompō, nr Mt Niitaka

Aeromachus inachus f. *formosanus* Matsumura, 1929; Ill. comm. Ins. Japan 1: 35 (list)

Specimens examined:

TAOYUAN CITY [= TAOYUAN Co.]: 1 ♂, Fuxing, Ronghua, 30. VIII. 1987, (Y. F. Hsu). TAIZHONG CITY [= TAICHUNG CITY/ TAICHUNG Co.]: 2 ♂, 1 ♀, Heping, Guguan, 12. VI. 1998, (Y. F. Hsu), 2 ♀, Heping, Deji, ca 1000m, 5. IX. 1996, (Y. F. Hsu), 2 ♂, Heping, Shangguguan, 900m, 25. IX. 2006, (Y. F. Hsu); 1 ♂, same locality, 30. X. 2006, (Y. F. Hsu), 2 ♂, Heping, Shangguguan, 900/1200m, 28. VII. 2007, (Y. F. Hsu). KAOHSIUNG CITY [= KAOHSIUNG Co.]: 1 ♂, Taoyuan, Shidong, 600m, 11.

VIII. 2011, (Y. F. Hsu). PINGDONG [= PINGTUNG] Co.: 1 ♂ , Wutai, Wutoushan, 1200/1300m, 8. IX. 1998, (Y. F. Hsu), 1 ♂ , Majia, ca 800m, 6. VIII. 2004, (L. H. Wang), 1 ♀ , Wutai, Ailiaobeixi/ Bayouxi, 500/900m, 14. III. 2008, (Y. F. Hsu& H. C. Huang). NANTOU Co.: 1 ♂ , Ren' ai, Ruru skpite. 15. IX. 1998, (C. Y. Hung), 1 ♀ , Ren' ai, Huisun, 23. X. 1998, reared from *Spodiopogon hayatai* [= *Spodiopogon tainanensis*], emgd. 18. XII. 1998, HSU 98K37, (C. Y. Hung), 1 ♀ , Ren' ai, Huisun, ca 700m, 14. XI. 2004, (Y. F. Hsu); 1 ♀ , same locality, 24. IX. 2005, (Y. F. Hsu), 1 ♀ , Ren' ai, Huisun Forestry Station, 16. X. 2010, (Y. F. Hsu).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Aeromachus bandaishanus Murayama & Shimonoya, 1968 (萬大弧弄蝶/萬大星褐弄蝶)

Ampittia matudai Murayama, 1943; *Zephyrus* 9 (3): 170; TL: Formosa

specimens examined:

TAIZHONG CITY [= TAICHUNG CITY/ TAICHUNG Co.]: 1 ♂, Heping, Siyuan Yakou, 1. VIII. 1990, 1900m (C. L. Li); 1 ♂, Shishanxi, 15. VII. 1997 (C. Y. Hung); 1 ♀, Heping, 710 Forest Trail, 2100m, 11. VII. 2007 (L. H. Wang). YILAN Co.: 1 ♂, Siyuan Forest Trail, 22. VI. 1999 (K. L. Chen); 1 ♂, Nan' ao, Tongshan, 28. VI. 2004 (L. H. Wang); 1 ♂, Xiulin, Bilu Divine Tree, 7. VIII. 1996 (J. L. Jean); 1 ♀, Datong, Taipingshan, 1600m, 15. VI. 2006 (L. H. Wang). HUALIAN [= HUALIEN] Co.: 1 ♂, 1 ♀, Xiulin, Bilu, 7. VI. 1986 (C. K. Yu); 3 ♂, 1 ♀, Xiulin, Bilu, 2000m, 3. VII. 1989 (Y. F. Hsu); 1 ♀, Xiulin, Bilu, 2300m, 8. VII. 1991 (Y. F. Hsu & C. L. Li); 1 ♂, Xiulin, Bilu, ca 2200m, 20. VII. 2007 (Y. F. Hsu); 1 ♂, Xiulin, Ci' en, ca 2000m, 28. VI. 2006 (L. H. Wang); 2 ♂, 1 ♀, Xiulin, Guangbeibabiao, 2200m, 5. VII. 2007 (L. H. Wang); 1 ♂, Xiulin, Kuailin, 2100m, 4. VII. 2007 (L. H. Wang). TAIDONG [= TAITUNG] Co.: 1 ♂, Yanping, Yanping Forest Trail, 30km, ca 1750m, 18. VI. 2000 (C. L. Li). NANTOU Co.: 1 ♂, Ren' ai, Yunhai, 2300m, 5. VI. 2008 (L. H. Wang).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown

mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX - XXX) - Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX - XXX) -

Female genitalia (Figs. XXX - XXX) - Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX - XXX) -

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Aeromachus matudai (Murayama, 1943) (霧社弧弄蝶/霧社星褐弄蝶)

Ampittia matudai Murayama, 1943; Zephyrus 9 (3): 170; TL: Formosa

Specimens examined:

[none]

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North

Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan.
(Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Genus *Ampittia* Moore, [1882]

Type species: *Hesperia maro* Fabricius, 1798

Diagnostic characters include the followings: 1) CuA2 of forewing arising from discoidal cell opposite or beyond R1; 2) wings dark brown with yellow spots and markings; 3) hindwing Rs distorted at base; 4) male of some species with sexual brands on forewing upperside.

Six species are known from Afrotropical and Oriental regions.

Two species occur in Taiwan.

Ampittia virgata 黃星弄蝶/狹翅黃星弄蝶/鉤形黃斑弄蝶

Pamphila virgata Leech, 1890; Entomologist 23: 47; TL: Chang Yang; Ichang

Ssp. *myakei* Matsumura, 1910

Ampittia myakei Matsumura, 1910; Ent. Zs. 23 (41) (41): 181; TL: Formosa, Horisha, Taihok and Arisan

Ampittia formosana Fruhstorfer, 1910; Dt. ent. Z. Iris 24 (5): 97; TL: Formosa, Chip-Chip

Ampittia arisana Matsumura, 1910; Entomologische Zeitschrift (Stuttgart) 23: 181

Specimens examined:

XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♂, Wulai, 4. X. 1987 (Y. F. Hsu); 1 ♀, same locality, 30. V. 2008, reared from *Miscanthus sinensis*, emgd. 5. V. 2008, HSU 08E48 (Y. F. Hsu); 1 ♀, Wulai, ca 200m, 5. VI. 2005, reared from *Miscanthus* sp., emgd. 10. VI. 2005, HSU 05F11 (Y. F. Hsu); 1 ♀, Sanxia, Manyueyuan Fall, 28. V. 1997, reared from *Miscanthus sinensis* var. *glaber*, emgd. 13. VI. 1997, HSU 97E57 (C. C. Lu). TAIPEI CITY: 1 ♂, Shilin, Lujiakeng, 4. VIII. 1987 (Y. F. Hsu); 1 ♂, Beitou, Qixingshan, 1100m, 3. VIII. 2009 (Y. F. Hsu& H. C. Huang). TAOYUAN CITY [= TAOYUAN Co.]: 1 ♂, Ronghua, 23. X. 1986 (Y. F. Hsu); 1 ♂, same locality, 13. V. 1987 (Y. F. Hsu); 1 ♂, Daman/ Xuanyuan, 19. VI. 1987 (Y. F. Hsu); 1 ♀, Baling/ Chiduan [Mingchi], 11. VII. 1985 (Y. F. Hsu); 1 ♂, Lalashan, 29. VI. 1983 (Y. F. Hsu); 1 ♂, Fuxing, Rt. 7 (Northern Cross- Highway?), 17. IX. 2009, reared from *Miscanthus*, emgd. 10. X. 2009 (C. H. Lin jr). TAIZHONG CITY [= TAICHUNG CITY/ TAICHUNG Co.]: 3 ♂, Heping, Wuling, 31. VII. 1985 (Y. F. Hsu). JIAYI [= CHIAYI] Co.: 1 ♀, Fanlu, Chukou, 1. V. 2006 (Y. F. Hsu); 1 ♂, Alishan, Shizhuo/ Dabang, 900/1000m, 2. V. 2010 (R. K. Dong& Y. F. Hsu). PINGDONG [= PINGTUNG] Co.: 1 ♂, Wutai, Wutoushan, 1000/1200m, 7/8. V. 2006 (Y. F. Hsu); 2 ♂, Wutai, Ailiaobeixi/ Bayouxi, 500/900m, 14. III. 2008, (Y. F. Hsu& H. C. Huang); 1 ♀, Wutai, Yichangshan, 1100/1400m, 15/16. III. 2009 (Y. F. Hsu&H. C. Huang). NANTOU Co.: 2 ♂, Ren' ai, Huisun Forest Field, 4. V. 1990 (C. L. Li); 1 ♂, Ren' ai, Ruru Skpite (人止關), 15. IX. 1998 (C. Y. Hung); 1 ♀, Ren' ai, Beidongyanshan, ca1800m, 6. XII. 2005, reared from *Miscanthus sinensis* [= *Miscanthus sinensis*], emgd. 1. II. 2006, HSU 06M16 (L. W. Wu& L. H. Wang); 1 ♂, Nanshanxi, 14. III. 1996 (Y. F. Hsu). YILAN Co.: 1 ♂, Chiduan [Mingchi], 28. VI. 1984 (Y. F. Hsu); 1 ♂, Nan' ao, Tongshan, 2000m, 10. VI. 1999 (Y. F. Hsu& L. H. Wang). HUALIAN [= HUALIEN] Co.: 1 ♂, Bilu, 2300m, 8. VIII. 1991 (Y. F. Hsu& C. L. Li); 1 ♂, Xiulin, Guanyuan, ca2300m, 29. VI. 2006 (L. H. Wang); 1 ♂, Xiulin, Wujaibengshan, 2000m, 29. V. 2007 (Y. F. Hsu).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present ay tornus of hindwing. A narrow, white, discal line on hindwing. Fringe

brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Genus *Borbo* Evans, 1949

Type species: *Hesperia borbonica* Boisduval, 1833

Diagnostic characters include the followings: 1) wings brown with hyaline spots; antenna 1/2 forewing costa in length; 3) mesotibia without spines or spines poorly developed; 3) no sexual brand.

About 20 species, mainly distributed in the Afrotropical region, but also in the Oriental and Australian region.

1 species occur in Taiwan.

***Borbo cinnara* (Wallace, 1866) (禾弄蝶/幽靈弄蝶/台灣單帶弄蝶/仙弄蝶)**

Hesperia cinnara Wallace, 1866; Proc. zool. Soc. Lond. 1866 (2): 361; TL: Formosa

Hesperia colaca Moore, 1877; Proc. zool. Soc. Lond. 1877 (3): 594, pl. 58, f. 7

Parnara cingala Moore, [1881]; Lepid. Ceylon 1 (4): 167, pl. 70, f. 3a-b; TL: Ceylon?

Specimens examined:

XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 2 ♂, 1 ♀, Wulai, 8. XI. 1987 (Y. F. Hsu); 1 ♀. same locality, emgd. 23. X. 1987 (Y. F. Hsu) 1 ♂, Xindian, Guangxing, 17. VII. 2002, reared from *Digitaria sanguinalis*, emgd. 29. VII. 2002, HSU 02G24 (H. S. Chuen& F. Z. Lin). TAIPEI CITY: 1 ♂, Shilin, Shanzaihou, emgd. 20. X. 1983 (Y. F. Hsu), 1 ♂, 13. XI. 1986 (Y. F. Hsu); 1 ♂, 1 ♀, NTU Insect Museum, 2. XI. 1987 (Y. F. Hsu); 1 ♂, 1 ♀, NTU, 27. XI. 1986 (Y. F. Hsu). TAOYUAN CITY [= TAUUYUAN Co.]: 1 ♀, Fuxing, Lalashan, 24. VI. 1987 (Y. F. Hsu); 1 ♀, Fuxing, Sule, 600m, 17. IX. 2008 (Y. F. Hsu& L. W. Huang). JIAYI [= CHIAIYI] Co.: 1 ♀, Fanlu, Chukou, ca350m, 1. V. 2006 (Y. F. Hsu); 1 ♂, Xingang, Yuemei, 27. II. 2006 (Y. F. Hsu); 1 ♂, Xingang, 15m, 26. VII. 2008 (Y. F. Hsu). TAINAN CITY [= TAINAN Co.]: 1 ♀, Guantian, Wushantou, 19. XII. 2005, reared from *Pennisetum purpureum*, emgd. 18. I. 2006, HSU 05M40 (Y. F. Hsu). KAOHSIUNG CITY [= KAOHSIUNG Co.]: 2 ♂, 2 ♀, Qijin, Dongsha Is., 30/3. VIII/ IX. 2012 (Y. F. Hsu); 4 ♀, Qijin, Dongsha Is., 30/3. VIII/ IX. 2012, reared from *pennisetum purpureum*, emgd. 14/19. IX. 2012, HSU 12J2 (Y. F. Hsu). PINGDONG [= PINGTUNG] Co.: 1 ♀, Hengchun, Kending, emgd. 28. IX. 1986 (Y. F. Hsu); 1 ♂, 2 ♀, same locality, 19. VII. 1987 (Y. F. Hsu); 1 ♀, Nanrenshan, 17. V. 1986 (Y. F. Hsu); 1 ♂, Maobitou, 11. IX. 1984 (Y. F. Hsu); 1 ♂, Fangliao, Shuidiliao, 13. X. 2008 (N. Y. Tasi). HUALIAN [= HUALIEN] Co.: 1 ♀, Xiulin, Huoranting, 900m, 11. X. 2008 (M. H. Sun& L. H. Wang). TAIDONG [= TAITUNG] Co.: 1 ♂, Lanyu, 15. VII. 1999 (C. Y. Hung); 1 ♀, same locality, emgd. 18. VIII. 2000 (C. Y. Hung); 1 ♀, same locality, 15. VIII. 2002, reared from *Arundo formosana*, emgd. 31. VIII. 2002, HSU 02H48 (C. Y. Hung& L. H. Chen); 1 ♀, Lanyu, Sidougou, 17/18. XI. 2007 (Y. F. Hsu& C. C. Hsieh); 1 ♂, Donghe, Donghe Fram, 350m, 16. X. 2007 (Y. F. Hsu); 1 ♂, Taitung, Pipa Lake, 1. IX. 2007 (J. H. Jean); 1 ♀, Taitung, Kangle, 20m, 21. IX. 2008 (Y. F. Hsu). NANTOU Co.: 1 ♀, Renai, Huisun, 1. XII. 1997, reared from *Digitaria radicata*,

emgd. 7. I. 1998, HSU 97M4 (Y. F. Hsu); 1 ♀, Lugu, Fonghuanggu Bird and Ecology Park, 23. XI. 1996, reared from *Pennisetum purpureum*, emgd. 20. XII. 1996 (Y. F. Hsu). LIANJIANG [= LIENCHIANG] Co.: 1 ♀, Beigan, Biyuan, 5. IX. 2003 (L. W. Wu). JINMEN [= KINMEN] Co.: 2 ♀, Jianhua, 20. VI. 2010 (C. K. Wang); 1 ♀, Jincheng, Shuitou, 29/30. VIII. 2011, reared from *Arundo* sp., emgd. 5. IX. 2011, HSU 11H53 (Y. F. Hsu & H. C. Huang).

Description.

Adult - Forewing length 17 - 24 mm. Male (Figs. XX - XX; XX - XX; XX - XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX - XXX) - Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX - XXX) -

Female genitalia (Figs. XXX - XXX) - Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX - XXX) -

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Genus *Caltoris* Swinhoe, 1893

Type species: *Hesperia kumara* Moore, 1878

Diagnostic characters include the followings: 1) wings dark brown or brown with hyaline spots or unmarked; 2) no white spot present at distal end of cell on hindwing underside; 3) mesotibia without spines.

About 20 species, distributed in the Oriental and Australian region.

2 species occur in Taiwan.

Caltoris cahira (Moore, 1877)(黯弄蝶/黑紋弄蝶/放踵珂弄蝶)

Hesperia cahira Moore, 1877; Proc. zool. Soc. Lond. 1877 (3): 593, pl. 58, f. 8; TL: Andamans

Ssp. *austeni* Moore, 1883

Baoris austeni Moore, [1884]; Proc. zool. Soc. Lond. 1883 (4): 533; TL: Khasia Hills; Cherra Pungi

Pamphila fallacina Mabille, 1891; Bull. Soc. Ent. Belg. 35 (18): clxxxi; TL: Cherra-Pungi

Caltoris onchisa Swinhoe, 1893; Trans. ent. Soc. Lond. 1893 (3): 323; TL: Shillong

Specimens examined:

XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♂, 1 ♀, Wulai, 22. VIII. 1985 (Y. F. Hsu); 1 ♂, same locality, 1. III. 1987 (Y. F. Hsu); 1 ♀, Miantianshan, 2. VII. 1987 (Y. F. Hsu); 1 ♂, Ruifang, Nanya, 26. IV. 2003, reared from *Arundo* sp., emgd. 28. V. 2003, HSU 03E35 (H. C. Huang). TAIPEI CITY: 1 ♂, Xiangshan, 4. VIII. 1987 (Y. F. Hsu); 2 ♂, Wenshan, Gongguan Campus, NTNU, 15. VII. 2005, reared from *Bambusa* sp., emgd. 26. VII. 2005, 05G15 (L. H. Wang). TAOYUAN CITY [= TAOYUAN Co.]: 2 ♂, 1 ♀, Fuxing, Baling, 500m, 29. V. 2002 (Y. F. Hsu); 1 ♂, Xuanyuan, 6. VIII. 1987 (Y. F. Hsu); 1 ♀, same locality, 27. II. 1988 (Y. F. Hsu). TAIZHONG CITY [= TAICHUNG CITY/ TAICHUNG Co.]: 1 ♂, Qingshui, 6. VIII. 2004 (D. C. Chen). YUNLIN Co.: 2 ♀, Douliu, Linnei, Tudigongkengxi, 9. I. 2004, reared from *Arundo formosana*, emgd. 18. III. 2004, HSU 04A1 (Y. F. Hsu). JIAYI [= CHIAYI] Co.: 1 ♀, Fanlu, Longmei, 11. XI. 2004 (Y. F. Hsu). TAINAN CITY [= TAINAN Co.]: 1 ♀, Guantian, Wushantou, 40m, 24. X. 2009 (Y. F. Hsu); 1 ♂, Baihe, Guanziling, 400m, 17. IX. 2002 (Y. F. Hsu); 1 ♀, Xinhua, 20. I. 2007 (Y. F. Hsu). KAOHSIUNG CITY [= KAOHSIUNG Co.]: 1 ♀, Tianliao, Yueshijie, 80m, 3. XII. 2011 (Y. F. Hsu). PINGDONG [= PINGTUNG] Co.: 1 ♂, 1 ♀, Chunri, Dahanshan, 1000m, 4. I. 2003, reared from *Arundo formosana*, emgd. 18/20. II. 2003, 03A8 (Y. F. Hsu). YILAN Co.: 1 ♀, Nanshan, 24. VI. 1988 (Y. F. Hsu). TAIDONG [= TAITUNG] Co.: 1 ♂, Luyexi, 3. I. 1988 (Y. F. Hsu). NANTOU Co.: 1 ♂, Yuchi, Lianhuachi, 700m, 10 VI. 2001 (Y. F. Hsu); 1(1381), Yuchi, Helongkeng, 550m, 20. V. 2004, reared from *Phragmites vallatoria* [= *Phragmites karka*], emgd. 1. VI. 2004, HSU 04E63 (Y. F. Hsu). LIANJIANG [= LIENCHIANG] Co.: 1 ♂, 1 ♀, Beigan, Leishan, 19. XI. 2013, reared from bamboo(?), emgd. 31. XII. 2013, HSU 13L67 (L. H. Wang& H. Y. Lee); 1 ♀, Mazu, V. 2003 (Y. A. Lin); 1 ♂, Nangan, Jieshou, 17. VII. 2003 (L. W. Wu& Y. A. Lin); 1 ♂, Nangan, Zholuo, 26. VII. 2000 (Y. F. Hsu).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white,

semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid.

Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Caltoris bromus Leech, 1894(變紋黯弄蝶/無紋弄蝶/無斑珂弄蝶)

Parnara bromus Leech, 1894; Butts China Japan Corea (2): 614, pl. 42, f. 10

Ssp. *yanuca* Fruhstorfer, 1911

Parnara yanuca Fruhstorfer, 1911; Dt. ent. Z. Iris 25 (4): 55; TL: Formosa

Ssp. *bromus* Leech, 1894

Specimens examined:

Ssp. yanuca: XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♀, Sanxia, Sande Graveyard, 100m, 1. X. 2002, reared from *Phragmites karka*, emgd. 5. X. 2002, HSU 02K3 (Y. F. Hsu). TAIPEI CITY: 1 ♂, Shilin, Jingshan, ca 600m, 1. VII. 2011, reared from *Arundo donax* var. *coleotricha* [= *Arundo donax*], emgd. 15. VIII. 2011, HSU 11H3 (Y. F. Hsu); 1 ♂, Shilin, Jingshan Road, 10. VII. 2014, reared from *Arundo sonax*, emgd. 26. VII. 2014, HSU 14G25 (Y. F. Hsu); 1 ♂, Wenshan, Jingmei, Xianjiyan, 31. V. 2005 (Y. X. Xie). XINZHU [= HSINCHU] Co.: 1 ♀, Guanxi, 13. VI. 2002 (Y. F. Hsu); 1 ♂, Guanxi, Fengshanxi, 15. VII. 2002, reared from *Phragmites karka*, emgd. 21. VII. 2002, HSU 02G20 (Y. F. Hsu); 1 ♀, same locality, 27. IX. 2002, reared from *Phragmites karka*, emgd. 14. X. 2002, HSU 02J47 (Y. F. Hsu). JIAYI [= CHIAYI] Co.: 2 ♂, 1 ♀, Dapu, Zengwen Dam, 19. II. 2004, reared from *Phragmites vallatoria* [= *Phragmites karka*], emgd. 23/4. IV/V. 2004, HSU 04B8 (Y. F. Hsu). TAINAN CITY [= TAINAN Co.]: 1 ♀, Baihe, Zhentoushan, 500m, 17. IX. 2002, reared from *Phragmites karka*, emgd. 30. IX. 2002, HSU 02J22 (Y. F. Hsu); 1 ♂, Baihe, Zhentoushan, 2. VII. 2003, reared from *Phragmites karka*, emgd. 20. VII. 2003, HSU 03G4 (Y. F. Hsu). KAOHSIUNG CITY [KAOHSIUNG Co.]: 1 ♂, Tianliao, ca 100m, 9. IV. 2010 (Y. F. Hsu); 1 ♂, same locality, 27. IV. 2010 (Y. F. Hsu); 1 ♀, Tianliao, Yueshijie, 80m, 3. XII. 2011 (Y. F. Hsu); 1 ♂, Liugui, 30. X. 2005, reared from *Phragmites vallatoria* [= *Phragmites karka*], emgd. 20. XI. 2006, HSU 06K52 (Y. F. Hsu); 1 ♂, same locality, 6. VI. 2008, reared from *Phragmites vallatoria* [= *Phragmites karka*], emgd. 20. VI. 2008, HSU 08F1 (Y. F. Hsu); 1 ♀, Jiaxian, 250m, 25. VI. 2003, reared from *Phragmites karka*, emgd. 25. VI. 2003, HSU 03F35 (Y. F. Hsu). YILAN Co.: 1 ♀, Yuanshan, Shuanglainpi, ca 450m, 4. VIII. 2006, reared from *Phragmites vallatoria* [= *Phragmites karka*], emgd. 5. VIII. 2006, HSU 06H9 (Y. F. Hsu, H. C. Huang, Y. C. Hsu & C. K. Wang). NANTOU Co.: 4 ♂, Yuchi, Helongkeng(網路上只找到侯龍坑和山龍坑，找不到合龍坑), 550m, 21. VIII. 2002, reared from *Phragmites karka*, emgd. 1/21. IX. 2002, HSU 02H58 (Y. F. Hsu); 1 ♂, same locality, 8. X. 2002, reared from *Phragmites vallatoria* [= *Phragmites karka*], emgd. 8. XI. 2002, 02K23 (Y. F. Hsu); 2 ♂, 3 ♀, same locality, 20. V. 2004, reared from *Phragmites vallatoria* [= *Phragmites karka*], emgd. 25/26. V/VI. 2004, HSU 04E63 (Y. F. Hsu).

Ssp. bromus: JINMEN [= KINMEN] Co.: 1 ♂, 1 ♀, Jinsha, Houling Park, 28. V. 2011, reared from *Arundo* sp., emgd. 11/12. VI. 2011, HSU 11E27 (Y. F. Hsu & H. C. Huang); 3 ♂, 2 ♀, Jincheng, Shuitou, 29/30. VIII. 2011 (Y. F. Hsu & H. C. Huang); 1 ♂, same

locality, 29. VIII. 2011, reared from *Arundo* sp., emgd. 3. X. 2011, HSU 11H53 (Y. F. Hsu & H. C. Huang). LIANJIANG [= LIENCHIANG] Co.: 1 ♂, Beigan, 10. XI. 2014 (C. W. Huang)

Description.

Adult - Forewing length 17 - 24 mm. Male (Figs. XX - XX; XX - XX; XX - XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX - XXX) - Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX - XXX) -

Female genitalia (Figs. XXX - XXX) - Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX - XXX) -

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Genus *Celaenorrhinus* Hübner, [1819]

Type species: *Papilio eligius* Stoll, [1781]

Diagnostic characters include the followings: 1) Forewing costa evenly arched; 2) wings brown with hyaline white or yellow spots on forewing, sometimes conjoining into a band; 3) underside of hindwing frequently with numerous small yellow non-hyaline spots; 4) most species with secondary sexual characters in male, including a patch of specialized scales on venter of metathorax, a pair of linear scent pouches on the underside of second abdominal segment, and a pair of metatibial hair tuft (de Jong, 1982).

A large and speciose genus with pantropical distribution. Over a hundred species are known, but some taxa in Africa used to belong to the genus has recently been re-assign to different genera by Libert (2014).

In Taiwan, six species occurs, with an additional doubtful taxon .

Celaenorrhinus maculosus (C. & R. Felder, [1867]) (大流星弄蝶/大型黃紋弄蝶)

Pterygospidea maculosa C. & R. Felder, [1867]; Reise Fregatte Novara, Bd 2 (Abth. 2) (3): 528, pl. 73, f. 7; TL: Shanghai, China

Celaenorrhinus refulgens Oberthür, 1896; Étud. d'Ent. 20: pl. 6; TL: Siao Lou, W.China

Ssp. *taiwanus* Matsumura, 1919

Celaenorrhinus maculosus var. *taiwanus* Matsumura, 1919: Thousand Insects of Japan, Additamenta 3: 686 (Type locality:)

Figs. XX – XX, XXX, XXX.

Specimens examined:

XINBEI CITY [=NEW TAIPEI CITY/ TAIPEI Co.]: 2 ♂, 2 ♀, Sanxia, Beichatianshan,

1700/1727m, 13/20. V/VI. 1996, reared from *Pilea angulata*, emgd. 9. VI. 1996, HSU 96E5 (Y. F. Hsu); 6 ♂, Sanxia, Beichatianshan, 9. III. 1997, 1100m, reared from *Pilea angulata*, emgd. 26/9. IV/V. 1997, HSU 97C4 (Y. F. Hsu); 1 ♂ (1465), Wuali, Badaoershan, 5. VII. 2005 (L. H. Wang). XINZHU [= HSINCHU] Co.: 1 ♂, 3 ♀, Wufeng, Dalu Forest Trail, 15km, 1500/1600m, 13. VIII. 2002 (Y. F. Hsu). TAIZHONG CITY [= TAICHUNG CITY/ TAICHUNG Co.]: 1 ♀ (1463), Lishan, 9. VIII. 1989 (Y. F. Hsu); 1 ♂, Shishanxi, 18. VII. 1997 (C. Y. Hung). PINGDONG [= PINGTUNG] Co.: 3 ♂, 7 ♀, Wutai, Wutoushan, 1200/1300m, 8. IX. 1998 (Y. F. Hsu); 1 ♂, Wutai, Wutoushan, 1200m, 28/29. IV. 2002 (C. C. Lu & C. L. Huang). YILAN Co.: 2 ♂, 1 ♀, Mingchi, Rt.7, 72km, ca 1200m, 29. IV. 1997, reared from *Pilea angulata*, emgd. 29/13. V/VI. 1997, HSU 97D79 (Y. F. Hsu); 4 ♂, Mingchi, Rt.7, 74.6km, ca 1100m, 3. V. 1997, reared from *Pilea angulata*, emgd. 23/4. V/VI. 1997, HSU 97E3 (Y. F. Hsu & C. C. Lu); 5 ♂, 2 ♀, Qilan, Rt.7, 77.4km, ca 1100m, 3. V. 1997, reared from *Pilea angulata*, emgd. 23/13. V/VI. 1997, HSU 97E2 (C. C. Lu & S. Y. Liu); 1 ♀, Datong, Siji Forest Trail, 9. VIII. 2005 (L. H. Wang). HUALIAN [= HUALIEN] Co.: 2 ♀, Qilai, 1300m, 11. VII. 1997 (Y. F. Hsu & C. L. Li); 1 ♂, 4 ♀, Zhouxi, Zhongping Forest Trail, 1100/1200m, 16. VII. 2004 (L. H. Wang). TAIDONG [= TAITUNG] Co.: 1 ♂, 2 ♀ (1379), Beinan, Lijia Trail, 27. IX. 1998 (W. I. Chou); 3 ♂, Beinan, Lijia Trail, 1100/1300m, 9. IX. 1999 (Y. F. Hsu); 2 ♂, Beinan, Dananxi, 18. VI. 2004 (C. L. Huang); 2 ♂, 1 ♀, Yanping, Hongye, 480m (C. C. Lu & L. W. Wu); 1 ♂, Haiduan, Lidao, ca 1500m, 2/3. VII. 2014 (C. W. Huang); 1 ♂, Daren, Dazhuxi, 7. VII. 2002 (C. L. Huang); 1 ♂, Daren, Dazhuxi, Paotai/Kaixiya, 800m, 22. VII. 2002 (C. L. Huang); 2 ♂, Donghe, Dulanshan, 30. VIII. 2002 (B. Y. Shi & W. J. Zheng). NANTOU Co.: 1 ♀, Xinyi, Shenmu Village, 30. VI. 1987.

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus correct, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without

dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Celaenorrhinus ratna Fruhstorfer, 1908 (小星弄蝶/白鬚黃紋弄蝶)

Celaenorrhinus[sic] sumitra ratna Fruhstorfer, 1908; *Ent. Zs.* 22 (12): 49; TL: Formosa, Kagi

Notocrypta kawakamii Matsumura, 1907: *Insect world*: 11: 5. (Type locality: Niitaka, Formosa)

Figs. XX – XX, XXX, XXX.

Specimens examined:

XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♂, 1 ♀, Wuali, Lalashan/ Kuaishan, 29. VIII. 1987 (Y. F. Hsu); 1 ♂, Wulai, Kuaishan, 25. VII. 1997 (C. Y. Hung); 2 ♂, 1 ♀, Wulai, Lalashan/ Kuaishan, 1500/1200m, 15. VII. 2000 (Y. F. Hsu); 1 ♂, Sanxia, Beichatianshan, 9. III. 1997, reared from *Strobilanthes formosanus*, emgd. 9. V. 1997, HSU 97C3 (Y. F. Hsu); 1 ♂, Sanxia, Beichatianshan, 21. VII. 1996 (C. Y. Hung). TAOYUAN CITY [= TAOYUAN Co.]: 1 ♂, Lalashan, 10. VII. 1982 (Y. F. Hsu); 1 ♂, same locality, 12. VII. 1986 (Y. F. Hsu); 1 ♂, same locality, 7. VII. 1987 (Y. F. Hsu); 3 ♂, 3 ♀, same locality, 24/25. VII. 1987 (Y. F. Hsu); 1 ♂, 1 ♀, same locality, 22. XII. 1996, reared from *Strobilanthes formosanus*, emgd. 25/2. IV/V. 1997, HSU 96M18 (Y. F. Hsu); 5 ♂, Fuxing, Baling/ Chiduan, 11. VII. 1985 (Y. F. Hsu). XINZHU [= HSINCHU] Co.: 2 ♂, 1 ♀, Wufeng, Dalu Forest Trail, 15km, 1500/1600m, 13. VIII. 2002 (Y. F. Hsu); 4 ♂, same locality, 21. VIII. 2002 (Y. F. Hsu). JIAYI [= CHIAYI] Co.: 1 ♂, Zhuqi, Fenqihu, 28. VI. 1987 (C. F. Lee); 2 ♂, same locality, 9. IX. 1989 (C. L. Li), 2 ♀, Alishan, Shizilu, 19. IX. 2004 (R. K. Dong). KAOHSIUNG CITY [= KAOHSIUNG Co.]: 1 ♂, Taoyuan, Tengchih, 7. VIII. 1990 (C. L. Li). PINGDONG [= PINGTUNG] Co.: 2 ♂, Wutai, Wutoushan, 1200/1300m, 8. IX. 1998 (W. I. Chou); 6 ♂, Wutai, 8. IX. 1998 (C. Y. Hung); 1 ♂, Wutai, Wutoushan, 1200m, 26. VI. 2003 (C. L. Huang & L. W. Wu); 2 ♀, Chunri, Dahanshan, 1400m, 19. VII. 2001 (W. I. Chou). YILAN Co.: 1 ♂, Nanshan, 24. VI. 1988 (Y. F. Hsu); 1 ♂, 1 ♀, Datong, Siji Forest Trail, 9. VIII. 2005 (L. H. Wang); 1 ♂, 1 ♀, Nanao, Shenmi Lake, 1100m, 24. VII. 1999 (Y. F. Hsu); 1 ♂, Nanao, Jinchaoshan(找不到這座山), 1100m, 29. VI. 2001 (Y. F. Hsu & C. C. Lu). HUALIAN [= HUALIEN] Co.: 3 ♂, Qilai, 1300m, 11. VII. 1991 (Y. F. Hsu & C. L. Li); 1 ♂, Zhouxi, Zhongping Forest Trail, 1100/1200m, 16. VII. 2004 (L. H. Wang). TAIDONG [= TAITUNG] Co.: 7 ♂, Beinan, Lijia Trail, 1100/1300m, 9. IX. 1999 (Y. F. Hsu); 1 ♂, Jinfeng, Jianshan, 7. IV. 2000, reared from *Strobilanthes flexicaulis*, emgd. 7. V. 2000, HSU 00D8 (Y. F. Hsu & C. C. Lu). NANTOU Co.: 1 ♂, Hewangshan, 11. VII. 1998 (H. Y. Lee); 1 ♂, Lugu, Xitou, 1100m, 20. IV. 2012, reared from *Strobilanthes flexicaulis*, emgd. 22. VI. 2012, HSU 12D16 (C. Y. Yen & L. H. Wang); 1 ♂, Xinyi, Shenmu Village, 30. VI. 1987 (Y. F. Hsu); 1 ♂, Xinyi, Lele, 20. VIII. 1982 (Y. F. Hsu); 1 ♂, Xinyi, Dongpu/ Duiguan, 1. IX. 2008 (C. L. Huang); 1 ♀, Zhushan, Shanlinxi, 8. VIII. 1986 (C. L. Li) .

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus correct,

1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Ampittia dioscorides (Fabricius, 1793) (小黃星弄蝶/小黃斑弄蝶/黃斑弄蝶)

Hesperia dioscorides Fabricius, 1793; Ent. Syst. 3 (1): 329, no. 250; TL: Tranquebar, S.India

Ssp. *etura* Mabille, 1891

Cycloptides etura Mabille, 1891; Bull. Soc. Ent. Belg. 35 (16): lxxv; TL: Hong Kong
Ampittia matsumurai Sonan, 1936; Zephyrus 6 (3/4): 213; TL: Formosa

Specimens examined:

XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♂, 1 ♀, Sanxia, Sande Graveyard, 100m, 1. X. 2002 (Y. F. Hsu); 1 ♂, Xindian, Guangxin, 17. IV. 2003 (Y. F. Hsu); 1 ♂, Xindian, Zhitan, 26. IX. 1999, reared from *Leersia hexandra*, emgd. 1. X. 1999, 99J63 (Y. F. Hsu & L. H. Wang). TAIPEI CITY: 2 ♂, 1 ♀, Xinyi, Xiangshan, 2. VIII. 1987 (Y. F. Hsu); 3 ♂, same locality, 3. VIII. 1987 (Y. F. Hsu); 1 ♂, same locality, 4. VIII. 1987 (Y. F. Hsu); 1 ♂, same locality, 6. VII. 1991, (Y. F. Hsu); 1 ♂, 1 ♀, Nangang, Nangangshan, 2. X. 1999 (Y. F. Hsu). TAOYUAN CITY [= TAOYUAN Co.]: 1 ♂, 1 ♀, Xinwu, Dongming, 125m, 15. IX. 1999 (Y. F. Hsu & L. H. Wang); 1 ♂, 2 ♀, Longtan, Shezi, 15. IX. 1999 (Y. F. Hsu). XINZHU [= HSINCHU] Co.: 3 ♂, 2 ♀, Zhubei, Lianhuasi, 11. IX. 1999 (Y. F. Hsu). TAINAN CITY [= TAINAN Co.]: 2 ♂, Xinhua, Dakeng, 80m, 10/11. II. 2006 (Y. F. Hsu); 2 ♀, same locality, 25. II. 2006 (Y. F. Hsu). KAOHSIUNG CITY [= KAOHSIUNG Co.]: 1 ♀, Meinong, Shuangxi, 150m, 31. XII. 2006 (Y. F. Hsu); 3 ♂, same locality, 22. I. 2007 (Y. F. Hsu). NANTOU Co.: 1 ♀, Yuchi, Lianhuachi, 600m, 12. IV. 2000 (Y. F. Hsu). JINMEN [= KINMEN] Co.: 2 ♂, Shuanglihu, 4. VI. 2000 (Y. F. Hsu).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus correct, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at

tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Celaenorrhinus major Hsu, 1990 (台灣流星弄蝶/江崎黃紋弄蝶)

Celaenorrhinus osculus major Hsu, 1990: Bulletin of the Institute of Zoology, Academia Sinica 29: 143 (Type locality: ILAN: Nanshan).

Figs. XX – XX, XXX, XXX.

Specimens examined:

XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♀, Lalashan, 9. VII. 1997; 5 ♂, 1 ♀, Wulai, Kuaishan, 1400m, 4. IV.1998, reared from *Pilea aquarum brevicornuta*, emgd. 1/15. V. 1998, HSU 98D1 (Y. F. Hsu); 1 ♀, same collecting data (Y. F. Hsu); 1 ♂, 1 ♀, Wuali, Lalashan/ Kuaishan, 1500/1200m, 15. VII. 2000 (Y. F. Hsu).
TAOYUAN CITY [= TAOYUAN Co.]: 1 ♀, Lalashan, 6. VII. 1990 (C. L. Li). XINZHU [= HSINCHU] Co.: 1 ♂, Jianshi, Lidongshan, ca 1550m, 16. VII. 2005 (H. C. Huang); 1 ♀, Wufeng, Dalu Forest Trail, 15km, 1500/1600m, 21. VIII. 2002 (C. Y. Hung).
TAIZHONG CITY [= TAICHUNG CITY/ TAICHUNG Co.]: 1 ♀ (1463), Lishan, 9. VIII. 1989 (Y. F. Hsu); 1 ♀, Shishanxi, 18. VII. 1997 (C. Y. Hung); 2 ♂, same locality, 29. VII. 1997 (C. Y. Hung); 1 ♂, Heping, Shishanxi, 1200m, reared from *Pilea matsudae*, emgd. 7. V. 1999, HSU 99E3 (Y. F. Hsu& C. C. Lu); 1 ♂, same locality, reared from *Pilea rotundinucula*, emgd. 5. V. 1999, HSU 99E31 (Y. F. Hsu& C. C. Lu); 1 ♂, Heping, Siyuan, 25. VII. 2007 (L. H. Wang); 2 ♂, 1 ♀, same locality, 27. VII. 2007 (Y. F. Hsu).
YILAN Co.: 2 ♂, 2 ♀, Datong, Siyuan, 2000m, 31. VII. 2007 (L. H. Wang). HUALIAN [= HUALIEN] Co.: 3 ♂, 1 ♀, Xiulin, Qilai, 1500m, 4. VII. 2007 (L. H. Wang); 1 ♀, Xiulin, Xinbaiyan, ca1700m, 20. VII. 2007 (Y. F. Hsu); 1 ♂, Xiulin, Bilu, 2300m, 8. VII. 1991 (Y. F. Hsu& C. L. Li); 2 ♂ (1472), Xiulin, Bilu, ca 2200m, 20. VII. 2007 (Y. F. Hsu).
TAIDONG [= TAITUNG] Co.: 1 ♂, Haiduan, Lidao, ca 1500m, 2/3. VII. 2014 (C. W. Huang). NANTOU Co.: 1 ♂, Renai, Songgang, 27. VI. 1997 (C. Y. Hung).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX):
Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing

upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Celaenorrhinus pulomaya (Moore, [1866]) (尖翅星弄蝶/蓬萊黃紋弄蝶)

Plesioneura pulomaya Moore, [1866]; *Proc. zool. Soc. Lond.* 1865 (3): 787; TL: Darjiling

Ssp. *formosanus* Fruhstorfer, 190

Celaenorrhinus maculicornis formosanus Fruhstorfer, 1909; *Ent. Zs.* 23 (30): 135; TL:

Formosoa, *Polisha*

Figs. XX – XX, XXX, XXX.

Specimens examined:

TAIWAN: XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♂, Wuai, Lalashan, 10. VII. 1982 (Y. F. Hsu); 2 ♂, Wulai, Lalashan/ Kuaishan, 24. VII. 1987 (Y. F. Hsu); 1 ♂, Sanxia, Manyueyuan, 21. V. 1994 (S. H. Yen); 1 ♂, Sanxia, Beichatianshan, 28/29. V. 1992 (Y. F. Hsu& M. Y. Lin). TAOYUAN CITY [= TAOYUAN Co.]: 1 ♀, Lalashan, 7. VII. 1987 (Y. F. Hsu); 1 ♀, Fuxing, Xuanyuan, 20. VIII. 1994 (S. H. Yen). XINZHU [= HSINCHU] Co.: 1 ♀, Wufeng, Dalu Forest Trail, 15km, 1500/1600m, 13. VIII. 2002 (Y. F. Hsu). TAIZHONG CITY [=TAICHUNG CITY/ TAICHUNG Co.]: 1 ♂, Shishanxi, 29. VII. 1997 (C. Y. Hung); 3 ♂, 1 ♀, Heping, Anmashan, 220 Trail, ca 2000m, 20. III. 1997, reared from *Strobilanthes formosanus*, emgd. 16/20. V/VI. 1997, HSU 97C32 (Y. F. Hsu); 2 ♂, same locality, 10. V. 1997, reared from *Strobilanthes* sp., emgd. 22/24. VI. 1997, HSU 97E19 (Y. F. Hsu, C. C. Lu, S. C. Chen& Y. H. Du); 1 ♀, Heping, Anmashan, 2000m, 28. VII. 2003 (H. C. Huang& Y. C. Hsu). JIAYI [= CHIAYI] Co.: 1 ♂, Alishan, Shizilu, ca 1500m, 18/19. VII. 2004 (R. K. Dong); 1 ♀, Alishan, Shizilu, 1600m, 30. VI. 2006 (R. K. Dong); 1 ♀, Alishan, Zhushan, 2400m, 1. VIII. 2006 (R. K. Dong). KAOHSIUNG CITY [= KAOHSIUNG Co.]: 2 ♂, Taoyuan, Tengchih, 7. VIII. 1990 (C. L. Li). PINGDONG [=PINGTUNG] Co.: 3 ♂, Wutai, Wutoushan, 1200/1300m, 8. IX. 1998 (Y. F. Hsu); 1 ♀, same locality, same collecting date (W. I. Chou). YILAN Co.: 1 ♀, Nanshan, 24. VI. 1988 (Y. F. Hsu); 1 ♂, Datong, Shenmazhenshan, 6. VIII. 1990 (C. L. Li); 3 ♂, Datong, Chiduan(Mingchi), 8. IX. 1994 (S. H. Yen); 2 ♂, Datong, Siji Forest Trail. 9. VIII. 2005, (L. H. Wang); 1 ♂, 1 ♀, Datong, Siyuanyakou, 1650m, 22. VII. 2001 (W. I. Chou); 1 ♀, Datong, Tuleng, 1600m, 11. VIII. 2009 (Y. F. Hsu). HUALIAN [= HUALIEN] Co.: 1 ♂, Xiulin, Luoshao/ Xinbaiyang, Rt. 8, 146km, 1450m, 18. V. 1997, reared from *Strobilanthes rankanensis*, emgd. 12. VI. 1997, HSU 97E36 (C. Y. Hung); 1 ♂, 2 ♀, Xiulin, Xinbaiyang, Rt. 8, 135.5km, 1800m, 18. V. 1997, reared from *Strobilanthes rankanensis*, emgd. 28/1. VI/VII. 1997, HSU 97E37.1 (Y. F. Hsu& C. Y. Hung); 1 ♀, Xiulin, Xinbaiyang, Rt. 8, 135.5km, 1850m, 18. V. 1997, reared from *Strobilanthes rankanensis*, emgd. 22. VI. 1997, HSU 97E38 (C. C. Lu& Y. F. Hsu). TAIDONG [= TAITUNG] Co.: 1 ♂, Haiduan, Lidao, ca 1500m, 2/3. VII. 2014 (C. W. Huang). NANTOU Co.: 1 ♂, Xinyi, Lele, 20. VIII. 1982 (Y. F. Hsu); 2 ♂, same locality, 17. VIII. 1989 (C. L. Li); 2 ♂, Xinyi, Lele/ Batongguan, 16. VIII. 1989 (C. F. Lee); 1 ♀, Xinyi, Batongguan, 18. VIII. 1989 (W. B. Huang); 2 ♂, Xinyi, Duiguan, 18. VIII. 1989 (C. L. Li); 1 ♀, Xinyi, Tatjia Saddle, 7. IX. 1989 (C. L.

Li); 1 ♂, Xinyi, Heshhe, 660m, 5. IX. 1997 (S. W. Loh); 3 ♂, 1 ♀, Hewangshan, IX. 1993 (S. H. Yen); 1 ♀, Renai, Biluxi, VIII. 1993 (S. H. Yen); 1 ♂, Ren' ai, Biluxi, 2200m, 31. VIII. 2008 (L H. Wang); 1 ♂, 1 ♀, Renai, Songgang, 6. VI. 1994 (S. H. Yen); 1 ♂, Renai, Cuifeng, 6. VI. 1994 (S. H. Yen); 1 ♂, Renai, Wushe, 1500m, 2. X. 1995 (S. H. Yen).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Celaenorrhinus horishanus Shirôzu, 1960 (埔里星弄蝶/台灣星弄蝶)

Celaenorrhinus horishanus Shirôzu, 1963; *Butterflies of Formosa in Colour: 381*

Figs. XX – XX, XXX, XXX.

Specimens examined:

XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♂, Sanxia, Zhulushan, 23. V. 2004 (R. K. Dong); 2 ♂, Sanxia, Beichatianshan, 22. V. 1993 (Y. F. Hsu& M. Y. Lin); 1 ♂, Sanxia, Beichatianshan, 1000m, 28/29. V. 1992 (Y. F. Hsu& M. Y. Lin); 1 ♂, same locality, 6. XII. 1997, reared from *Strobilanthes formosanus*, emgd. 2. IV. 1998, HSU 97M9 (Y. F. Hsu); 1 ♀, Sanzhi, Erziping, 30. VI. 2015, reared from *Strobilanthes rankanensis*, emgd. 4. III. 2015, 15F52 (Y. F. Hsu). TAIZHONG CITY [= TAICHUNG CITY/ TAICHUNG Co.]: 1 ♀, Shishanxi, 29. VII. 1997 (C. Y. Hung); 1 ♀, Anmashan, 30. VIII. 1996, reared from *Strobilanthes formosanus*, emgd. 27. XII. 1996, HSU 96H22 (C. L. Zhan). XINZHU [=HSINCHU] Co.: 1 ♀, Jianshi, Lidongshan, ca1500m, 26. VI. 2005 (H. C. Huang). NANTOU Co.: 1 ♂, Hanshanxi(南山溪? Nanshanxi), ca1000m, 19. IX. 1997, reared from *Strobilanthes flexicaulis*, HSU 97J32 (C. C. Lu& C. Y. Hung); 1 ♂, Nanshanxi, 8. IV. 1997 (C. Y. Hung); 1 ♂, Puli, Hewangshan, 18. IV. 1984 (Ra); 1 ♀, same locality, 14. IX. 1984 (Ra); 1 ♀, Renai, Hewang, 1600m, 3. VI. 2003 (Y. F. Hsu); 1 ♂, Renai, Guandaoshan, 28. V. 1997 (Y. F. Hsu); 1 ♀, Renai, Songgang, 27. VI. 1997 (C. C. Lu); 1 ♀, Lugu, Xitou, 1050m, 18. IX. 1997, reared from *Strobilanthes flexicaulis*, emgd. 18. IX. 1997, HSU 97J30 (C. C. Lu&C. Y. Hung); 1 ♂, Fonghuanggu, 5. V. 1997 (Y. F. Hsu). JIAYI [=CHIAIYI] Co.: 4 ♀, Alishan, Shizilu, 18. VII. 2004 (R. K. Dong); 3 ♂, 7 ♀, Alishan, Shizilu, ca 1500m, 18/19. VII. 2004 (R. K. Dong). PINGDONG [= PINGTUNG] Co.: 1 ♂, Wutai, Wutoushan, 1200/1400m, 23. V. 1998 (C.

Y. Hung); 4 ♀, Wutai, Wutoushan, 23. V. 1998 (C. C. Lu); 3 ♂, 2 ♀, Wutai, Wutoushan, 1200m, 28/29. IV. 2002 (C. C. Lu&C. L. Huang); 1 ♀, same locality, 26. VI. 2003 (C. L. Huang& L. W. Wu); 1 ♂, 1 ♀, same locality, 7/8. V. 2006 (Y. F. Hsu); 1 ♂, 1 ♀, Wutai, Ali, 25. V. 2006 (L. W. Wang); 2 ♂, 3 ♀, Wutai, Wutoushan, 1100/1200m, 5. V. 2007 (Y. F. Hsu); 1 ♀, Wutai, Ali, ca1000m, 31. V. 2006 (L. H. Wang&C. C. Lu); 5 ♀, Shizi, Lilongshan, 9. IX. 1998, reared from *Strobilanthes flexicaulis*/*Strobilanthes longespicus*, emgd. 5/20. XII/I. 1998/1999, HSU 98J18 (Y. F. Hsu& C. C. Lu); 1 ♀, Shizi, Lilongshan, 600/700m, 25. VIII. 2007, reared from *Strobilanthes longespicus*, emgd. 8. III. 2008, HSU 07H38 (Y. F. Hsu); 1 ♀, Shizi, Lilongshan, 1050m, 25. VIII. 2007, reared from *Strobilanthes flexicaulis*, emgd. 13. XII. 2007, HSU 07H39 (Y. F. Hsu); 1 ♀, Shizi, Lilongshan, 800/1050m, 25. VIII. 2007, reared from *Strobilanthes flexicaulis*, emgd. 28. III. 2008, HSU 07H39 (Y. F. Hsu); 5 ♂, 1 ♀, Chunri, Dahan Forest Trail, 23km, 1270m, 6. V. 2002 (C. L. Li). HUALIAN [= HUALIEN] Co.: 1 ♂, Xiulin, Qilai, 1500m, 4. VII. 2007 (L. H. Wang). TAIDONG [= TAITUNG] Co.: 1 ♀, Beinan, Lijia Froest Trail, 1050/1300m, 27. VIII. 1998, reared from *Strobilanthes flexicaulis*, emgd. 27. III. 1999, HSU 98H18 (Y. F. Hsu); 2 ♂, Beinan, Lijia Froest Trail, 1300m, 9. IX. 1999, reared from *Strobilanthes flexicaulis*, emgd. 9/13. XII. 1999, HSU 99J16.1 (Y. F. Hsu& C. C. Lu).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase

slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan.

(Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Celaenorrhinus kurosawai Shirôzu, 1960 (黑澤星弄蝶/姬黃紋弄蝶)

Celaenorrhinus kurosawai Shirôzu, 1963; Butterflies of Formosa in Colour: 378

Figs. XX – XX, XXX, XXX.

Specimens examined:

XINBEI CITY [= NEW TAIPEI City/ TAIPEI Co.]: 1 ♂, Manyueyuan waterfall, 21. V. 1994, (S. H. Yen); 1 ♀, Wulai, Kuaishan, 23. VIII. 1984, (Y. F. Hsu); 1 ♂, same locality, 29. VIII. 1987, (Y. F. Hsu). TAOYUAN CITY [= TAOYUAN Co.]: 4 ♂, Lalashan, 24/25. VII. 1987, (Y. F. Hsu). XINZHU [= HSINCHU] Co.: 1 ♀, Wufeng, Dalu Forest Trail, 15km, 1500/1600m, 13. VIII. 2002, (Y. F. Hsu); 2 ♂, Wufeng, Dalu Forest Trail, 15km, 1500/1600m, 21. VIII. 2002, (Y. F. Hsu). TAIZHONG CITY [= TAICHUNG City/

TAICHUNG Co.]: 1 ♂, Heping, Siyuanyakou, 1. VIII. 1990, (C. L. Li); 2 ♂, Heping, Anmashan, 2000m, 28. VII. 2003, (H. C. Huang& Y. C. Hsu). YILAN Co.: 1 ♂, Datong, Siji Forest Trail, 9. VIII. 2005, (L. H. Wang); 7 ♂, 1 ♀, Datong, Siyuan, 2000m, 31. VII. 2007, (L. H. Wang); 3 ♂, Datong, Tuleng, 3. VIII. 2009, (L. H. Wang& C. H. Lin jr); 1 ♀, same locality, 11. VIII. 2009, (Y. F. Hsu); 1 ♂, Datong, Tuleng, 1700m, 3. VIII. 2009, (L. H. Wang& C. H. Lin jr). HUALIAN [= HUALIEN] Co.: 1 ♀, Xiulin, Cien, Rt. 8, 136km, 1850/1900m, 1. I. 1997, reared from *Strobilanthes flexicaulis*, emgd. 26. IV. 1997, HSU 97A2, (Y. F. Hsu); 1 ♂, Xiulin, Xinbaiyang, Rt. 8, 141.5km, 1670m, 1. I. 1997, reared from *Strobilanthes flexicaulis*, emgd. 22. V. 1997, HSU 97A4, (Y. F. Hsu); 1 ♂, 2 ♀, Xiulin, Xinbaiyang, Rt. 8, 135.5km, 1800m, 18. V. 1997, reared from *Strobilanthes rankanensis*, emgd. 22/9. VI/VII. 1997, HSU 97E37, (Y. F. Hsu& C. Y. Hung); 1 ♀, Xiulin, Xinbaiyang, Rt. 8, 135.5km, 1850m, 18. V. 1997, reared from *Strobilanthes rankanensis*, emgd. 3. VII. 1997, HSU 97E38.1, (C. C. Lu& Y. F. Hsu); 1 ♂, Xiulin, Bilu, ca 2200m, 20. VII. 2007, (Y. F. Hsu); 1 ♂, 3 ♀, Xiulin, Kuailin, 2100m, 10. IX. 2008, (L. H. Wang).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae

membraneous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight. 雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Genus *Coladenia* Moore, [1881]

Type species: *Plesioneura indrani* Moore, [1866]

Diagnostic characters include the followings: 1) wings brown with hyaline white yellow spots on wings; 2) dark brown markings on hindwings; 3) male with metatibial hair tufts.

Approximately 20 species known, distributed in the Oriental region.

One species occurs in Taiwan.

Coladenia pinsbukana Shimonoya & Murayama, 1976(台灣窗弄蝶/黃後翅弄蝶)

Coladenia pinsbukana Shimonoya & Murayama, 1976: 43. (TL: “Amuh-chi, Central Formosa”).

Specimens examined:

TAOYUAN CITY[= TAOYUAN Co.]: 2 ♂, 1 ♀, Fuxing, Ronghua, ca500m, 7. IV. 2016 (male genitalia preparation JYL 296)(R. K. Dong, L. H. Wang & C. W. Huang); 1 ♂,

Fuxing, Neikuihui, 17. IV. 2017, (H. C. Huang)

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Genus *Daimio* Murray, 1875

Type species: *Pyrgus tethys* Ménétriès, 1857

Diagnostic characters include the followings: 1) wings brown with prominent hyaline white spots on forewing; 2) a white band or patch present on hindwing; 4) male with recumbent metatibial hair tufts; 5) female with anal hair tuft.

Only one species is included in the genus, distributed in eastern Palearctic and northern Oriental region.

The sole species occurs in Taiwan.

Daimio tethys (Ménétriès, 1857) (玉帶弄蝶/白帶弄蝶)

Pyrgus tethys Ménétriès, 1857; *Cat. lep. Petersb.* 2: 126, pl. 10, f. 8; TL: *Itsu Peninsula, Honshu, Japan*

Ssp. *niitakana* Matsumura, 1907

Daimio niitakana Matsumura, 1907: *Insect World* 11: 50.

Specimens examined:

JILONG [= KEELUNG] CITY: 1 ♂, 1 ♀, Longgang Trail, 13. X. 2009 (Y. F. Hsu).
XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♂, Wulai, 25. IX. 2009, reared from *Dioscorea alata*, emgd. 2. X. 2009, HSU 09J3, (Y. F. Hsu); 1 ♂, Shiding, Ergeshan, ca500m, 12. III. 2009 (N. Y. Tasi). TAIPEI CITY: 1 ♀, Wenshan, Muzha, Hills S. of NCU campus, 20. III. 2009 (N. Y. Tasi); 1 ♂, Songshan, Hushan, 150m, 24. II. 2010 (C. K. Wang). TAOYUAN CITY [= TAOYUAN Co.]: 1 ♂, Fuxing, Sule, 600m, 17. IX. 2008 (Y. F. Hsu & L. W. Wu). NANTOU Co.: 1 ♂, Xinyi, Dongpu, 1200m, 31. VII. 2009 (Y. F. Hsu). PINGDONG [= PINGTUNG] Co.: 1 ♂, 1 ♀, Shizi, Lilongshan, 500m, 17. II. 2008 (Y. F. Hsu); 1 ♂, Shizi, Nunaishan, 26. III. 2006 (Y. F. Hsu); 1 ♂, Wutai, Wutoushan, 9. IV. 1999 (Y. F. Hsu); 1 ♀, Mudan, Gaoshifoshan, 450m, 4. II. 2010 (L.

H. Wang)

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Genus *Erionota* Mabille, 1878

Type species: *Papilio thrax* Linnaeus, 1767

Diagnostic characters include the followings: 1) Wings brown, with prominent hyaline white or yellow spots on forewing; 2) hindwing upperside unmarked; 3) compound eyes red while alive.

A dozen species are known, distributed in the Oriental and western Australian regions.

One notorious pest species agriculture invaded Taiwan in 1980s.

Erionota torus Evans, 1941(蕉弄蝶/香蕉弄蝶)

Erionota torus Evans, 1941; Entomologist 74 (7): 158; TL: Sikkim

Specimens examined:

XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♂, Xindian, Wufengshan, 28. IX. 1992 (L. X. Li). TAINAN CITY [= TAINAN Co.]: 1 ♂, Baihe, Guanziling, 23. IX. 2014, reared from *Musa* sp., emgd. 28. IX. 2014, HSU 14J59 (Y. F. Hsu); 1 ♂, Xinhua, 11. IX. 2013, reared from *Musa sapientum* (沒在物種名錄裡面), emgd. 30. IX. 2013, HSU 13H61 (Y. F. Hsu). PINGDONG [= PINGTUNG] Co.: 1 ♀, emgd. 20. III. 1987 (Y. F. Hsu); 1 ♂, emgd. 21. III. 1987 (Y. F. Hsu); 1 ♂, 1 ♀, emgd. 4. III. 1987 (Y. F. Hsu); 1 ♀, emgd. 2. II. 1987 (Y. F. Hsu); 2 ♀, emgd. 11. III. 1987 (Y. F. Hsu); 1 ♀, emgd. 10. III. 1987 (Y. F. Hsu); 1 ♀, emgd. 17. II. 1987 (Y. F. Hsu); 1 ♂, 1 ♀, emgd. 25. III. 1987 (Y. F. Hsu); 1 ♀, emgd. 2. III. 1987 (Y. F. Hsu); 1 ♂, emgd. 4. II. 1987 (Y. F. Hsu); 1 ♂, emgd. 24. II. 1987 (Y. F. Hsu). JINMEN [= KINMEN] Co.: 1 ♂, 3 ♀, Jincheng, Shuitou, 29/30. VIII. 2011 (Y. F. Hsu & H. C. Huang).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Genus *Halpe* Moore, 1878

Type species: *Halpe moorei* Watson, 1883

Diagnostic characters include the followings: 1) Wings brown, with two white or creamy white spots in cell M3 and CuA1 of forewing; 2) male with sexual brand present on forewing upperside in most species; 3) uncus with broad scalloped distal end; 4) gnathos absent or reduced.

Approximately 40 species are known, distributed in the Oriental region.

One species occurs in Taiwan.

Halpe gamma Evans, 1937(昏列弄蝶/黃斑小褐弄蝶)

Halpe gamma Evans, 1937 ; TL: Taiwan

specimens examined:

XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♂, Wulai, 12. V. 1987, (Y. F. Hsu). TAOYUAN CITY [= TAOYUAN Co.]: 1 ♂, Fuxing, Lalashan, 19. VII. 1983 (Y. F. Hsu); 2 ♂, Fuxing, Ronghua/ Gaoyi, 26. V. 1986 (Y. F. Hsu); 1 ♂, Fuxing, Ronghua/ Sule, 13. V. 1987 (Y. F. Hsu); 1 ♂, Fuxing, Daman/ Xuanyuan, 14. VI. 1987 (Y. F. Hsu); 1 ♂, Fuxing, Xuanyuan, 6. VIII. 1987 (Y. F. Hsu); 4 ♂, Fuxing, Sanmin, 400m, 8. IX. 2008 (Y. F. Hsu); 1 ♂, same locality, 24. IX. 2009 (Y. F. Hsu); 2 ♂, 1 ♀, Fuxing, Sanmin, 500m, 20. IX. 2011 (Y. F. Hsu); 1 ♀, Fuxing, Sileng, ca 1000m, 18. II. 2002, reared from *Sinobambusa kunishii*, emgd. 15. V. 2002, HSU 02B17 (Y. F. Hsu). XINZHU [= HSINCHU] Co.: 1 ♂, Jianshi, Lidongshan, ca 1500m, 3. IX. 2005 (Y. F. Hsu); 1 ♂, 2 ♀, Guanxi, Shanglin orchard, 22. VIII. 2007 (C. C. Lu). HUALIAN [= HUALIEN] Co.: 1 ♂, Tongmen, Nenggao Trail, 1800m, 24. III. 2007, reared from *Yushania niitakayamensis*, emgd. 23. V. 2007, HSU 07D36.1 (L. H. Wang)

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment

minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu,

1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Genus *Isoteinon* C. & R. Felder, 1862

Type species: *Isoteinon lamprospilus* C. & R. Felder, 1862

Diagnostic characters include the followings: 1) Wings brown, with hyaline white spots on forewing; 2) hindwing underside yellowish brown with prominent white spots; 3) fringe checkered.

Only one species is included, distributed in Oriental and eastern Palearctic regions.

The sole representative species occurs in Taiwan.

Isoteinon lamprospilus C. & R. Felder, 1862 (白斑弄蝶/狹翅弄蝶/旖弄蝶)

Isoteinon lamprospilus C. & R. Felder, 1862 : Wien. ent. Monats. 6 (1): 30; TL: Ning-Po

Ssp. *formosanus* Fruhstorfer, 1911

Isoteinon lamprospilus formosanus Fruhstorfer, 1910; Dt. ent. Z. Iris 24 (5): 98; TL:

Formosa

specimens examined:

XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♀, Xindian, Sikanshui, 24. III. 2008, reared from *Miscanthus* sp., emgd. 21. IV. 2008, HSU 08C20 (L. H. Wang); 1 ♂, Wulai, Jiajiuliao, 150m, 10. IX. 2008 (Y. F. Hsu); 1 ♂, Tamsui, Pingding, ca250m, 1. VIII. 2011 (H. C. Huang). TAIPEI CITY: 3 ♂, Wenshan, Muzha, Taipei City Zoo, 25. IV. 2010 (Y. F. Hsu). TAIZHONG CITY [= TAICHUNG CITY/ TAICHUNG Co.]: 1 ♂, Heping, Shaolaishan, 800m, 12. VIII. 2011 (Y. F. Hsu). JIAYI [= CHIAYI] Co.: 1 ♂, Fanlu, Chukou, 250m, 29. VIII. 2008 (Y. F. Hsu). TAINAN CITY [= TAINAN Co.]: 1 ♂, Baihe, Zhentoushan, 2. VII. 2003 (Y. F. Hsu); 1 ♂, same locality, 27. VIII. 2004 (Y. F. Hsu); 1 ♂, same locality, 24. IX. 2010 (Y. F. Hsu). NANTOU Co.: 1 ♂, Lugu, Fonghuanggu Bird and Ecology Park, 27. VIII. 1996, reared from *Miscanthus floridulus*, emgd. 13. IX. 1996, HSU 96H20 (Y. F. Hsu).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing

triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Genus *Lobocla* Moore, 1884

Type species: *Plesioneura liliana* Atkinson, 1871

Diagnostic characters include the followings: 1) Antenna arcuate; 2) wings brown with hyaline white spots, sometimes conjoining into a band; 3) underside of hindwing with dark markings; 4) forewing with a costal fold.

Seven species are known (Evans, 1949).

In Taiwan, one species occurs.

***Lobocla bifasciata* (Bremer & Grey, 1853)(雙帶弄蝶/白紋弄蝶)**

Eudamus bifasciatus Bremer & Grey, 1853; in Motschulsky, Etudes entomologiques 1: 60 (Type locality: “Peking” [Beijing, China])

Lobocla bifasciata disparalis Murayama, 1995; TL: Dali, Yunnan

Ssp. *kodairai* Sonan, 1936

Lobocla kodairai Sonan, 1936: Zephyrus 6: 209 (Type locality: Hori, Formosa [Puli, Taiwan])

Figs. XX – XX, XXX, XXX.

Specimens examined:

TAOYUAN City [= TAOYUAN Co.]: 1 ♂, Fuxing, Baling, 29. IV. 1997, (genitalia preparation JYL297) (Y. F. Hsu). NANTOU Co.: 1 ♂, Beidongyanshan, 2. VII. 1989 (Y. F. Hsu); 1 ♀, Ren' ai, Lushan, 21. VI. 1999 (Y. Ohara); 1 ♀, Renai, Songgang, 22. VII. 2000, (H. W. Cheng) (genitalia preparation JYL298); 1 ♂, Renai, Tunyuan, 2000m, 6. VII. 2012 (Y. F. Hsu); 1 ♂, Renai, Tunyuan, 1500m, 3. VII. 201, (Y. F. Hsu). MIAOLI Co.: 1 ♂, 1 ♀, Taian, Henglongshan, 1400m, 19. VI. 2004, reared from *Dumasia miaoliensis*, emgd. 27/IV- 26/V. 2005, HSU 04F4 (S. C. Chen, C. C. Lu & L. L. Yang).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a

dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Genus *Notocrypta* de Niceville, 1889

Type species: *Plesioneura curvifascia* C. & R. Felder, 1862

Diagnostic characters include the followings: 1) Wings dark brown, with hyaline white band on forewing; 2) hindwing cell approximately 1/2 of wing length; 3) antenna longer than 1/2 of forewing costa.

12 species are known, distributed in Oriental, Australian, and and eastern Palearctic regions.

Two species occur in Taiwan.

***Notocrypta curvifascia* (C. & R. Felder, 1862) (袖弄蝶/黑弄蝶/曲紋袖弄蝶)**

Plesioneura curvifascia C. & R. Felder, 1862; Wien. ent. Monats. 6 (1): 29; TL: Ningpo
Notocrypta morishitai Liu & Gu, 1994; in Chou, Monographia Rhopalocerum Sinensium 1-2: 773, 718, f. 85-86; TL: Hainan

Notocrypta eitschbergeri Huang, 2001; Neue Ent. Nachr. 51: 66, f. 1-2, pl. 1, f. 2; TL: Longpo to Nidadan, Nujiang Valley, SE. Tibet

specimens examined:

XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♂, 2 ♀, Xindian, Sikanshui, 30. IV. 2006, reared from *Alpinia zerumbet*, emgd. 10/12. VI. 2006, HSU 06D76 (L. H. Wang); 1 ♂, Wulai, 15. IV. 2005 (Y. F. Hsu); 1 ♂, same locality, 5. VI. 2005 (Y. F. Hsu); 1 ♂, same locality, 5. VI. 2005, reared from *Alpinia japonica*, emgd. 10. VII. 2005, HSU 05F12 (Y. F. Hsu). TAIPEI CITY: 1 ♀, Da'an, Fuzhoushan, 30. IV. 2007, reared from *Alpinia* sp., emgd. 21. V. 2007, HSU 07D35 (Y. F. Hsu) 1 ♂, Wenshan, Gongguan Campsu, NTNU, 4. VII. 2005, reared from *Alpinia* sp., emgd. 24. VII. 2005 (J. R. Chen); 1 ♀, Zhongqiang, Park, 4. XII. 2000 (C. C. Lu). TAOYUAN CITY [= TAOYUAN Co.]: 2 ♂, Fuxing, Daman/Xuanyuan, 23. IV. 1987 (Y. F. Hsu); 1 ♂, same locality, 23. VI. 1999 (Y. T. Lo). MIAOLI Co.: 1 ♂, Nanzhuang, Luchang, Fengmei Fall, 14. I. 2006, reared from *Alpinia japonica*, emgd. 16. II. 2006, HSU 06A14 (Y. F. Hsu). TAINAN CITY [= TAINAN Co.]: 2 ♀, Dongshan, Kantoushan, 600/800m, 4. II. 2010 (Y. F. Hsu); 1 ♂, Wushantou, ca 80m, 24. X. 2005 (Y. F. Hsu). KAOHSIUNG CITY [= KAOHSIUNG Co.]: 1 ♂, Taoyuan, Xiaoguanshan Forest Trail, 13. XI. 2005, reared from *Alpinia* nr. *japonica*, emgd. 10. II. 2006, HSU 05L27 (Y. F. Hsu). TAIDONG [= TAITUNG] Co.: 1 ♀, Donghe, Donghe Fram, 400m, 25. I. 2007, reared from *Alpinia* sp., emgd. 11. II. 2007, HSU 07A36 (Y. F. Hsu); 1 ♀, same locality, 25. I. 2007, reared from *Alpinia uraiensis*, emgd. 5. II. 2007, HSU 07A15 (Y. F. Hsu).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect,

1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Notocrypta feisthamelii (Boisduval, 1832) (連紋袖弄蝶)

Thymeles feisthamelii Boisduval, 1832; in d'Urville, Voy. Astrolabe (Faune ent. Pacif.) 1: 159, pl. 2, f. 7; TL: Amboina

Notocrypta feisthamelii satra Fruhstorfer, 1911; Dt. ent. Z. Iris 25 (2): 23; TL: Buru

Celaenorrhinus unipuncta Rothschild, 1915; Novit. Zool. 22 (1): 142; TL: Kanike, North Ceram, 600m

Ssp. arisana Sonan, 1930

Ssp. alinkara Fruhstorfer, 1911

Notocrypta feisthamelii alinkara Fruhstorfer, 1911; Dt. ent. Z. Iris 25 (2): 22; TL: Mindanao, Philippine

Specimens examined:

Ssp. arisana: XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♂, Sanxia, Beichatianshan, 28/29. V. 1992 (Y. F. Hsu& M. Y. Lin); 1 ♂, same locality, 22. V. 1993 (Y. F. Hsu& M. Y. Lin); 1 ♂, same locality, 29. IV. 2000 (Y. F. Hsu), 1 ♂, 2 ♀, Sanxia, Beichatianshan, 1700/1727m, 13/5. V/ VI. 1996, reared from *Alpinus japonicus* [= *Alpinia japonica*], emgd. 25. V. 1996, HSU 96E4 (Y. F. Hsu); 1 ♂, Shuangxi, Yingzidingshan, 900m, 8. VIII. 2001 (Y. F. Hsu). TAOYUAN CITY [= TAUUYUAN Co.]: 1 ♂, Fuxing, Lalashan, 4. VI. 1988 (Y. F. Hsu); 1 ♂, Fuxing, Daman/Xuanyuan, 16. VI. 1987 (Y. F. Hsu). KAOHSIUNG CITY [= KAOHSIUNG Co.]: 1 ♂, Tengzhi, Shishan, 1550/1700m, 18. VI. 1989 (Y. F. Hsu). UNKNOWN: 1 ♀, emgd. 28. VIII. 1986 (Y. F. Hsu).

Ssp. alinkara: TAIDONG [= TAITUNG] Co.: 2 ♂, Lanyu, 22/26. VII. 1988 (C. F. Lee); 1 ♂, same locality, 24. VIII. 1999 (C. Y. Hung); 7 ♂, 1 ♀, same locality, 18/20. III. 2006, reared from *Alpinia flabellata*, emgd. 31/15. III/IV. 2006, HSU 06C19 (Y. F. Hsu& H. C. Huang); 1 ♀, same locality, 19. II. 2009, reared from *Alpinia flabellata*, emgd. 5. III. 2009 (C. H. Lin jr); 1 ♂, Lanyu, Lanyu Waether Station, 22. I. 1999 (C. F. Lee); 2 ♂, Lanyu, Sidaogou, 18/20. III. 2006 (Y. F. Hsu& H. C. Huang); 1 ♂, same locality, 3/5. III. 2007 (Y. F. Hsu& H. C. Huang); 3 ♂, 1 ♀, same locality, 3/5. III. 2007, reared from *Alpinia flabellata*, emgd. 2/15. IV. 2007, HSU 07C5 (Y. F. Hsu& H. C. Huang); 1 ♂, same locality, 10. IV. 2007 (Y. F. Hsu); 1 ♂, Lanyu, Qiwei, 11. III. 2011 (Y. F. Hsu).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Genus *Ochlodes* Scudder, 1872

Type species: *Hesperia nemorum* Boisduval, 1852

Diagnostic characters include the followings: 1) Wings dark brown or tawny with white or tawny spots, hyaline in some species; 2) phallus stout, with elaborate aedeagus; 4) tibial spines present; 5) sexual brand on forewing upperside in male.

About 25 species are known, mainly distributed in the Holarctic region, but extending to northern Oriental region.

Two species occurs in Taiwan.

Ochlodes niitakanus (Sonan, 1936) (台灣赭弄蝶/玉山黃斑弄蝶)

Augiades bouddha niitakana Sonan, 1936: Zephyrus 6:213. (Type locality:)

Specimens examined:

XINZHU CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♀, Wulai, Kuaishan, 24. VI. 1987 (Y. F. Hsu). TAOYUAN CITY [= TAOYUAN Co.]: 1 ♂, Fuxing, Lalashan, 9. VII. 1982 (Y. F. Hsu); 1 ♂, Fuxing, Shangbaling/ Lalashan, 9. VII. 1985 (Y. F. Hsu); 1 ♂, Fuxing, Sileng, 27. VI. 1988 (Y. F. Hsu); 1 ♀, Fuxing, Lalashan/ Kuaishan, 24. VII. 1987 (Y. F. Hsu). XINZHU [= HSINCHU] Co.: 3 ♀, Wufeng, Dalu Forest Trail, 15km, 1500/1600m, 13. VIII. 2002 (Y. F. Hsu). YILAN Co.: 1 ♂, Datong, Mingchi, 26. XI. 2002, reared from *Brachypodium kawakamii*, emgd. 18. III. 2003, HSU 02L24 (H. S. Que); 1 ♂, 1 ♀, Datong, Taipingshan, 1700m, 15. VI. 2007 (Y. F. Hsu); 1 ♀, Taipingshan, 17/19.5K, 14. VII. 2017 (C. W. Huang). NANTOU Co.: 1 ♀, Ren' ai, Songgang, 27. VII. 1986 (Y. F. Hsu); 1 ♂, Ren' ai, Tunyuan, 1700m, VI. 2010 (N. Y. Tasi); 3 ♂, Zhushan, Shanlinxi, 20. VI. 1987 (C. L. Li).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment

minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Ochlodes bouddha yuckinginus Murayama & Shimonoya, 1963(菩提赭弄蝶/雪山黃斑弄蝶)

Specimens examined:

XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♂, Sanxia, Beichatianshan, 25. VI. 1989 (Y. F. Hsu); 1 ♂, Sanxia, Beichatianshan, ca 1700m, 7. VI. 2006 (L. H. Wang).
TAIZHONG CITY [= TAICHUNG CITY/ TAICHUNG Co.]: 1 ♂, Heping, Siyuan, 24. VI. 1988 (M. Z. Lin); 1 ♀, same locality, 27. VII. 2007 (Y. F. Hsu). YILAN Co.: 1 ♂, Nan' ao, Tongshan, 1800m, 16. VI. 1999 (C. C Lu); Provincial Rd. No. 7A, 40K, 28. VII. 2017 (C. W. Huang). HUALIAN [= HUALIEN] Co.: 1 ♂, Xiulin, Bilu, 3. VII. 1989 (Y. F. Hsu).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Genus *Onryza* Watson, 1893

Type species: *Halpe meiktila* de Niceville, 1891

Diagnostic characters include the followings: 1) Wings brown, with yellow spots; 2) a double, conjoined spot at distal end of discoidal cells, with posterior one elongate; 3) male with sexual brand present on forewing upperside and recumbent hair tuft on hindwing upperside in some species.

5 species are known, distributed in the northern part of the Oriental regions.

One species occur in Taiwan.

Onryza maga (Leech, 1890) (黃點弄蝶/竹內弄蝶/謳弄蝶)

Pamphila maga Leech, 1890; Entomologist 23: 48; TL: Ichang; Ningpo

Ssp. *takeuchii* (Matsumura, 1929)

Ampittia takeuchii Matsumura, 1929: Insecta Matsumurana 3: 107.

specimens examined:

XINZHU [= HSINCHU] Co.: 1 ♂, Guanwu, 2/3. VII. 1996 (S. C. Chen). TAIZHONG CITY [= TAICHUNG CITY/ TAICHUNG Co.]: 2 ♂, Heping, Dasyueshan Sacred Tree, 2500m, 1. VII. 1992 (C. L. Li). NANTOU Co.: 2 ♀, Ren' ai, Tianchi, 2700m, 3. VII. 2007 (L. H. Wang); 1 ♂, 1 ♀, Ren' ai, Songchuangang, ca 2500m, 29. VI. 2006 (L. H. Wang); 1 ♀, Wuling, 30. VI. 1989 (Y. F. Hsu). YILAN Co.: 1 ♀, Nan' ao, Tongshan, 1800m, 10. VI. 1999 (Y. F. Hsu). HUALIAN [= HUALIEN] Co.: 2 ♀, Guangbeibabiao, 2200m, 5. VII. 2007 (L. H. Wang); 1 ♀, Bilu, 3. VII. 1989 (Y. F. Hsu); 1 ♂, Ci' en, ca 2000m, 28. VI. 2006 (L. H. Wang).

Description.

Adult - Forewing length 17 - 24 mm. Male (Figs. XX - XX; XX - XX; XX - XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX - XXX) - Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX - XXX) -

Female genitalia (Figs. XXX - XXX) - Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX - XXX) -

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Genus *Parnara* Moore, 1881

Type species: *Eudamus guttata* Bremer & Grey, [1852]

Diagnostic characters include the followings: 1) antenna shorter than 1/2 forewing costa, distal end club-like; 2) mesotibia smooth; 3) discal sexual brand on forewing upperside of male.

9 species according to Chiba (1991), distributed in the Afrotropical, Oriental and Australian region.

2 species occur in Taiwan.

***Parnara bada* (Moore, 1878) (小稻弄蝶/姬一文字弄蝶/姬單帶弄蝶/么紋稻弄蝶)**

Hesperia bada Moore, 1878; Proc. zool. Soc. Lond. 1878 (3): 688; TL: Ceylon

Hesperia quinigera Moore, 1878; Proc. zool. Soc. Lond. 1878 (3): 703; TL: Hainan

Gegenes hainanus Moore, 1878; Proc. zool. Soc. Lond. 1878 (3): 703; TL: Hainan

Hesperia intermedia Plötz, 1883; Stett. ent. Ztg 44 (1-3): 44; TL: Java

Hesperia daendali Plötz, 1885; 226; TL: Batavia

Hesperia nondoa Plötz, 1886; Stettin ent. Ztg 47 (1-3): 97; TL: Manila

Baoris distinctus Holland, 1887; Trans. Amer. Ent. Soc. 14: 123; TL: Hainan

Baoris (Parnara) philotas de Nicéville, 1895; J. Bombay nat. Hist. Soc. 9 (4): 402, (3) pl. Q, f. 60; TL: North Kanara; Trevandrum, S.India

Specimens examined:

XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♀, Wulai, 23. X. 1986 (Y. F. Hsu); 1 ♂, 2 ♀, Wulai, Fushan Research Station, ca 700m, 4/5. VIII. 2006 (Y. F. Hsu & H. C. Huang); 1 ♀, Xindian, Shizitoushan, 1. VIII. 2010 (H. C. Huang); Sanzhi, Datunshan, 800m, 12. VII. 2007 (Y. F. Hsu). TAOYUAN CITY [= TAOYUAN Co.]: 1 ♂, Fuxing, Lalashan, 24. VI. 1987 (Y. F. Hsu); 1 ♀, same locality, 31. X. 1987 (Y. F. Hsu). TAIZHONG CITY [= TAICHUNG CITY/ TAICHUNG Co.]: 1 ♀, Heping, Guguan, 12. VI. 1998 (Y. F. Hsu). ZHANGHUA [= CHANGHUA] Co.: 1 ♀, Changhua City, Baguashan, 22. VII. 2002, reared from *Leersia hexandra*, emgd. 1. VIII. 2002 (L. H. Wang & J. M. Wu). JIAYI [= CHIAYI] Co.: 1 ♂, 3 ♀, Xingang, Yuemei, 1. V. 2006 (Y. F. Hsu); 1 ♂, Xingang, Yuemei, 15m, 6. V. 2007 (Y. F. Hsu); 3 ♂, 2 ♀, same locality, 9. VI. 2007 (Y. F. Hsu); 8 ♂, 1 ♀, same locality, 11. VI. 2007 (Y. F. Hsu); 1 ♀, Fanlu, Chukou, ca 350m, 12. II. 2006 (Y. F. Hsu); 1(1416), same locality, 4. V. 2007 (Y. F. Hsu); 2 ♂, 1(1413), same locality, 6. V. 2007 (Y. F. Hsu); 1 ♂, Alishan, Shizhou/ Dabang, 900/1000m, 25. IX. 2010 (Y. F. Hsu). KAOHSIUNG CITY [= KAOHSIUNG Co.]: 1 ♀, Xizi Bay, 8. IX. 2000 (Y. F. Hsu); 1 ♀, Zhuoying, 14. X. 2008 (N. Y. Tsai). PINGDONG [= PINGTUNG] Co.: 1 ♀, Wutai, Wutoushan, 1200m, 4/5. IV. 1998 (W. I. Chou); 1 ♂, 1 ♀, Hengchun, Kending, 10. IX. 1984 (Y. F. Hsu). TAIDONG [= TAITUNG] Co.: 1 ♀, Lanyu, Badai Bay, 3/4. VII. 1998 (C. C. Lu). LIANJIANG [= LIENCHIANG] Co.: 1 ♀, Mazu (D. C. Chen).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white,

semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid.

Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Parnara guttata (Bremer & Grey, 1853) (稻弄蝶/一文字弄蝶/單帶弄蝶)

Eudamus guttatus Bremer & Grey, [1852]; in Motschulsky, Etud. Ent. 1: 60; TL: Beijing, China

Eudamus guttatus Bremer & Grey, 1853; Schmett. N. China: 10, pl. 3, f. 2
Hesperia fortunei Felder, 1862; Verh. zool.-bot. Ges. Wien 12 (1/2): 489; TL: Shanghai
Hesperia dalima Plötz, 1883; Stett. ent. Ztg 44 (1-3): 44; TL: "Brasilien"
Parnara kotoshona Sonan, 1936; 214; TL: Formosa

Specimens examined:

JILONG [= KEELUNG] City: 2 ♂, 2 ♀, Qiuhonghu, 20. X. 2009, reared from grass(?), emgd. 8. XII. 2009, HSU 09K29 (J. H. Lin, C. K. Wang& C. H. Lin); 1 ♀, same locality, 26. X. 2009, (C. K. Wang); 1 ♂, Jilongyu, 25. IX. 2011 (H. C. Huang). XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♂, 5 ♀, Wulai, 8. X. 1998, reared from *Isachne globosa*, emgd. 8/23. XI. 1998, HSU 98K12 (Y. T. Lo& C. C Lu); 1 ♂, Ruifang, Nanya, 1. IX. 2002 (Y. F. Hsu); 3 ♀, same locality, 9. X. 2010 (Y. F. Hsu); 1 ♂, same locality, 12. X. 2010 (J. H. Lin); 1 ♀, Shiding, Ergeshan, 600m, 7. VI. 2010 (N. Y. Tsai). TAIPEI CITY: 1 ♂, Xiangshan, 6. VII. 1991 (Y. F. Hsu). YILAN Co.: 1 ♀, Toucheng, Guishan Is., 23. IX. 2006 (H. C. Huang). HUALIAN [= HUALIEN] Co.: 2 ♂, Fengbin, Changhongqiao, 21. X. 1996 (Y. F. Hsu); 1 ♂, Xiulin, Tianxiang, 20. VII. 2007 (Y. F. Hsu). TAIDONG [= TAITUNG] Co.: 2 ♂, Ludao, 25/27. IX. 2004 (Y. F. Hsu& H. C. Huang). LIANJIANG [= LIENCHIANG] Co.: 1 ♂, Nangan, Tiebao, 13. IV. 2014 (Y. F. Hsu, H. C. Huang& C. L. Haung); 2 ♂, 1 ♀, Mazu, 10. X. 2004 (D. C. Chen); 1 ♀, same locality (D. C. Chen).

Description.

Adult - Forewing length 17 - 24 mm. Male (Figs. XX - XX; XX - XX; XX - XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present ay tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX - XXX) - Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe

produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Genus *Pelopidas* Walker, 1870

Type species: *Pelopidas midea* Walker, 1870

Diagnostic characters include the followings: 1) wings brown with hyaline spots; 2) a white spot present at distal end of cell on hindwing underside; 3) mesotibia with spines; 4) discal linear sexual brand present on forewing upperside.

About 10 species, mainly distributed in the Oriental, Afrotropical, Australian and southern Palearctic region.

4 species occur in Taiwan.

Pelopidas sinensis (Mabille, 1877) (中華褐弄蝶/台灣褐弄蝶/中華穀弄蝶)

Gegenes sinensis Mabille, 1877; Bull. Soc. zool. Fr. 2 (3): 232; TL: Shangai, China

prominens (Moore, 1882) (Chapra[?]); Proc. zool. Soc. Lond. 1882 (1): 261

Pamphila similis Leech, 1890; Entomologist 23: 48; TL: Chang Yan

Specimens examined:

TAIZHONG CITY [= TAICHUNG CITY/ TAICHUNG Co.]: 1 ♂, Xueshankengxi, 1. VIII. 1985 (Y. F. Hsu)(genitalia preparation JYL299). NANTOU Co.: 1 ♂, Lugu, Xitou, Yushuikeng, 3. VI. 1997, reared from Pennisetum purpureum, emgd. 2. VII. 1997, HSU 97F7 (Y. F. Hsu& C. C. Lu); 1 ♀, Renai, Beidongyanshan, ca 1800m, 6. XII. 2005, reared from Miscanthus sinensis, emgd. 20. I. 2005, HSU 05M15 (L. W. Wu& Y. F. Hsu).

Description.

Adult - Forewing length 17 - 24 mm. Male (Figs. XX - XX; XX - XX; XX - XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX - XXX) - Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX - XXX) -

Female genitalia (Figs. XXX - XXX) - Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Pelopidas conjuncta (Herrich-Schäffer, 1869) (巨褐弄蝶/台灣大褐弄蝶/古銅穀弄蝶)

Goniloba conjuncta Herrich-Schäffer, 1869; CorrespBl. zool.-min. Ver. Regensburg 23 (12): 195, no. 45

Gegenes javana Mabille, 1877; Bull. Soc. zool. Fr. 2 (3): 232

Specimens examined:

XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♀, Xindian, Sikanshui, 29. XI. 2002, reared from Miscanthus sp., emgd. 23. XII. 2002, HSU 02L33 (H. S. Chuen); 1 ♀, Wulai, 9. X. 2004, reared from Miscanthus floridulus, emgd. 24. XI. 2004, HSU 04K4 (L. H. Wang). TAIPEI CITY: 1 ♂, Shilin, Jingshan Road, 26. XI. 2008, reared from Miscanthus sp., emgd. 26. XI. 2008, HSU 08L37 (B. C. Lin). JIAYI [= CHIAYI] Co.: 1 ♂, Fanlu, Chukou, 28. I. 2008 (D. C. Chen). HUALIAN [= HUALIEN] Co.: 4 ♀, Shoufeng, Liyu Lake, 18. V. 1997, reared from Miscanthus var. glaber [= Miscanthus sinensis], emgd. 2/14. VI. 1997, HSU 97E31 (Y. F. Hsu). TAIDONG [= TAITUNG] Co.: 1 ♀, Yanping, Yanping Forest Trail 20K, 30. VII. 1992 (C. L. Li). NANTOU Co.: 1 ♀,

Yuchi, Lianhuachi, 24. I. 1999 (C. Y. Hung); 1 ♀, Lugu, Fonghuanggu Bird and Ecology Park, 25. X. 1996 (C. Y. Hung).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Pelopidas agna (Moore, 1866) (尖翅褐弄蝶/南亞穀弄蝶)

Hesperia agna Moore, [1866]; Proc. zool. Soc. Lond. 1865 (3): 791; TL: Bengal

Pamphila similis Moore, [1881]; Lepid. Ceylon 1 (4): 169 (nom. nud., Mabille MS)

Chapra mathias niasica Fruhstorfer, 1911; Dt. ent. Z. Iris 25 (4): 50; TL: Nias

Specimens examined:

JILONG [= KEELUNG] CITY: 1 ♀, Zhongzheng, Longgang Trail, 26. IX. 2006 (Y. F. Hsu). XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♂, Wulai, Kuaishan/ Lalashan, 29. VII. 1987 (Y. F. Hsu); 2 ♂, Wulai, 3. VIII. 1987 (Y. F. Hsu); 1 ♀, Xindian, Sikanshui, 200/400m, 6. VIII. 2007 (Y. F. Hsu). TAIPEI CITY: 1 ♀, Beitou, Wujianlianfeng, 21. X. 1984 (Y. F. Hsu); 1 ♂, Da' an, NTU, 12. I. 1987 (Y. F. Hsu). TAOYUAN CITY [= TAOYUAN Co.]: 1 ♀, Fuxing, Shangbaling, 30. VI. 1983 (Y. F. Hsu); 1 ♂, same locality, 5. VII. 1987 (Y. F. Hsu); 1 ♀, same locality, 8. VII. 1987 (Y. F. Hsu); 1 ♂, same locality, 29. VII. 1987 (Y. F. Hsu); 1 ♂, Fuxing, Lalashan, 26. VI. 1984 (Y. F. Hsu); 1 ♂, same locality, 6. VII. 1987 (Y. F. Hsu). XINZHU [= HSINCHU] Co.: 1 ♂, Guanxi, 29. VI. 2010 (Y. F. Hsu). JIAYI [= CHIAYI] Co.: 1 ♂, 1 ♀, Xingang, Yuemei, ca 15m, 11. VI. 2007 (Y. F. Hsu). PINGDONG [= PINGTUNG] Co.: 1 ♂, Manzou, Nanrenshan, 17. V. 1986 (Y. F. Hsu). YILAN Co.: 1 ♀, Nanao, Tongshan, 1800m, 16. VI. 1999 (C. C. Lu).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment

minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Pelopidas mathias (Fabricius, 1798) (褐弄蝶/隱紋穀弄蝶)

Hesperia mathias Fabricius, 1798; Ent. Syst. (Suppl.): 433, no. 289-90; TL: Tranquebar, S.India

Hesperia julianus Latreille, [1824]; Encyclopédie Méthodique 9 (2): 763

Hesperia chaya Moore, [1866]; Proc. zool. Soc. Lond. 1865 (3): 791

Pamphila umbrata Butler, 1879; Ann. Mag. nat. Hist. (5) 3 (15): 191; TL: Johanna I.

Ssp. oberthueri Evans, 1937

Specimens examined:

JILONG [= KEELUNG] CITY: 1 ♀, Pengjiayu, 9. IX. 2008 (N. Y. Tasi, C. H. Yen& L. W. Wu). XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 2 ♂, Ruifang, Nanya, 12. X. 1999 (Y. F. Hsu); 1 ♂, Xindian, Sikanshui, 1. VII. 2011, reared from Miscanthus sp., emgd. 15. VII. 2011 (J. H. Lin). TAIPEI CITY: 1 ♀, Neihu, 15. VI. 2005, reared from grass, emgd. 17. VII. 2005 (C. L. Huang). TAIZHONG CITY [= TAICHUNG CITY/ TAICHUNG Co.]: 2 ♀, Heping, Siyuan, 25. VII. 2007 (L. H. Wang); 1 ♂, Heping, Anmashan, 12. VI. 2001 (H. S. Que). JIAYI [= CHIAYI] Co.: 2 ♂, Xingang, Yuemei, 12. II. 2006 (Y. F. Hsu); 1 ♀, same locality, 1. V. 2006 (Y. F. Hsu). KAOHSIUNG CITY [= KAOHSIUNG Co.]: 1 ♂, Sanmin, Jinshi Lake, II. 1997, emgd. 20. III. 1997, HSU 97B1 (S. C. Chen); 1 ♀, same locality, 29. III. 1997, emgd. 22. V. 1997, HSU 97C60 (Y. F. Hsu, C. C. Lu& C. Y. Hung); 1 ♀, same locality, 27. V. 1997, reared from Panicum maximum, emgd. 9. VI. 1997, HSU 97E54 (Y. F. Hsu); 1 ♀, same locality, 22. XI. 1997, reared from Panicum maximum, emgd. 7. I. 198, HSU 97L19 (C. C. Lu& Y. T. Lo); 1 ♀, same locality, 18. I. 1998, reared from Panicum maximum, emgd. 21. I. 1998, HSU 98A6 (Y. F. Hsu); 1 ♂, same locality, 13. IX. 1998 (S. C. Chen). JINMEN [= KINMEN] Co.: 1 ♀, Shangyi Airport, 30. VIII. 2011 (Y. F. Hsu& H. C. Huang). LIANJIANG [= LIENCHIANG] Co.: 1 ♂, Beigan, Qinbi, 22. IV. 2007 (Y. F. Hsu& H. C. Huang).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus correct,

1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Genus *Polytremis* Mabille, 1904

Type species: *Goniloba lubricans* Herrich-Schäffer, 1869

Diagnostic characters include the followings: 1) forewing upperside, hyaline spots yellow; 2) upperside hindwing, hyaline spots inconspicuous; 3) male genitalia, lateral process of uncus clearly separated at base; 4) female genitalia with sclerotized finger-like process between anterior and posterior lamella.

Monotypic. Widely distributed from India to Sulawesi.

One species occur in Taiwan.

PlanB: Four species (*lubricans*, *minuta*, *annama*, and *kittii*) distributed from India to Sulawesi, of which taxonomic status of three species is ambiguous.

Polytremis kiraizana (Sonan, 1938) (奇萊孔弄蝶/奇萊褐弄蝶)

Parnara kiraizana Sonan, 1938: *Zephyrus* 7:255.

Specimens examined:

XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♂, Wulai, Kuaishan, 12. VII. 1986 (Y. F. Hsu); 1 ♀, same locality, emgd. 14. VI. 1988 (Y. F. Hsu). TAOYUAN CITY [= TAOYUAN Co.]: 2 ♂, Sileng, 27. VI. 1988 (Y. F. Hsu). NANTOU Co.: 1 ♂, Renai, Tunyuan, 28. VII. 2006 (Y. F. Hsu); 1 ♂, Ren' ai, Beidongyanshan, ca 1800m, 6. XII. 2005, reared from *Miscanthus sinensis*, emgd. 18. II. 2006, HSU 05M15 (Y. F. Hsu). YILAN Co.: 1 ♂, Datong, Taipingshan, 1200m, 14. VI. 2001 (Y. T. Lo& Y. A. Lin); 1 ♀, Datong, Taipingshan, 1700m, reared from *Miscanthus sinensis*, emgd. 30. VI. 2007, HSU 07F16 (Y. F. Hsu); 2 ♂, Chiduan [Mingchi], 11. VII. 1985 (Y. F. Hsu). HUALIAN [= HUALIEN] Co.: 1 ♂, Qilai, 1300m, 11. VII. 1991 (Y. F. Hsu& C. L. Li); 1 ♂, Lungchien to Lunghsi, 10. VII. 1991 (Y. F. Hsu).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs.

Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in

many disturbed areas, including urban habitats (Hsu, 2013).

後記

Polytremis zina (Evans, 1932)(長紋孔弄蝶/刺紋孔弄蝶)

Polytremis zina (Evans, 1932); Indian Butterflies (edn. 2): 416; TL: "Omeishan"
[SW.China]

Ssp. *asahinai* Shirōzu, 1952

Polytremis zina taiwana Murayama, 1981

Specimens examined:

XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♀, Sanzhi, Zhuzishan, 1000m, V. 2007, reared from Miscanthus sp., emgd. 2. VI. 2007 (J. L. Jean); 1 ♂, Sanzhi, Datunshan, 800m, 18. VII. 2007 (Y. F. Hsu); 3 ♂, Datunshan, 23. VI. 1986 (Y. F. Hsu); 1 ♂, same locality, 20. VII. 1986 (Y. F. Hsu); 1 ♂, Tamsui, Erziping, ca 800m, 18. VI. 2005 (H. C. Huang). TAIPEI CITY: 1 ♂, Beitou, Qixingshan, ca 1000m, 14. VI. 2011, reared from Miscanthus sp., emgd. 16. VI. 2011, 11F7.1 (C. Y. Liao). TAOYUAN CITY [= TAOYUAN Co.]: 2 ♂, Sileng, 26. VI. 1987 (Y. F. Hsu); 6 ♂, same locality, 27. VI. 1988 (Y. F. Hsu); 1 ♂, Lalashan, reared from Yushania niitakayamensis, emgd. 1. VI. 1988 (Y. F. Hsu). YILAN Co.: 3 ♂, Nanao, Jinchaoshan, 1100m, 29. VI. 2001 (Y. F. Hsu& C. C. Lu); 2 ♀, Nanao, Shenmihu, 30. VI. 2001 (H. S. Chuen); 1 ♂, Datong, Mingchi, 1200m, 22. IV. 2002, reared from Brachypodium kawakamii, emgd. 18. III. 2003, HSU 02L24 (H. S. Que& L. W. Wu); 1 ♂, same locality, 1. V. 2007, reared from Miscanthus sinensis, emgd. 4. VI. 2007, HSU 07E3 (Y. F. Hsu); 2 ♂, same locality, 11. V. 2007, reared from Miscanthus sinensis, emgd. 6/8. VI. 2007, HSU 07E19 (Y. F. Hsu); 1 ♂, Chiduan[Mingchi], 28. VI. 1984 (Y. F. Hsu); 1 ♂, same locality, 26. VII. 1986 (Y. F. Hsu); 1 ♀, Datong, Taipingshan, 22. V. 2005, reared from Miscanthus sinensis, emgd. 22. VI. 2005, HSU 05E23 (L. H. Wang); 1 ♀, Datong, Siyuan, 2000m, 31. VI. 2007 (L. H. Wang); 4 ♂, Yuanshan, Fushan Botanical Garden, reared from Miscanthus sp., emgd. 19/26. V. 2003, HSU 03D77 (L. W. Wu). HUALIAN [= HUALIEN] Co.: 1 ♂, Qilai, 1300m, 11. VII. 1991 (Y. F. Hsu& C. L. Li); 1 ♂, Lungchien to Lunghsi, 10. VII. 1991 (Y. F. Hsu).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment

minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu,

1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Polytremis lubricans kuyaniana (Matsumura, 1919) (黃紋孔弄蝶/黃紋褐弄蝶)

Goniloba lubricans Herrich-Schäffer, 1869; CorrespBl. zool.-min. Ver. Regensburg 23 (12): 195, no. 34; TL: Java

Gegenes contigua Mabille, 1877; Bull. Soc. zool. Fr. 2 (3): 232 n. (1); TL: Java

Hesperia toona Moore, 1878; Proc. zool. Soc. Lond. 1878 (3): 689; TL: NE.Bengal

Specimens examined:

JILONG [= KEELUNG] City: 1 ♀, Longgang Trail, 2. IX. 2006 (Y. F. Hsu). XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♂, Wulai, 22. VIII. 1985 (Y. F. Hsu); 1 ♂, same locality, 16. X. 1986 (Y. F. Hsu); 1 ♂, Xindian, Sikanshui, 23. V. 2004 (L. H. Wang); 3 ♂, 2 ♀, Ruifang, Nanya, 2. X. 2002, reared from *Miscanthus sinensis*, emgd. 14. XI. 2002, HSU 02K6 (L. H. Wang). TAIPEI CITY: 1 ♂, Wenshan, Xianjiyan, 22. V. 2005, reared from *Miscanthus* sp., emgd. 10. VI. 2005, 05E25 (Y. F. Hsu). TAOYUAN CITY [= TAOYUAN Co.]: 1 ♂, Fuxing, Sileng, ca 1000m, 5. III. 2009 (C. H. Lin jr). PINGDONG [= PINGTUNG] Co.: 1 ♂, Wutai, Yichangshan, 1100-1400m, 15/16. III. 2009 (Y. F. Hsu& H. C. Huang). HUALIAN [= HUALIEN] Co.: 1 ♂, Xiulin, Taroko, 60m, 11. XI. 2007 (M. H. Sun). NANTOU Co.: 1 ♂, Nanshanxi, 9. IX. 1999 (C. Y. Hung); 1 ♀, Renai, Tunyuan, 1550m, 4. VI. 2006 (C. C. Lu)..

Description.

Adult - Forewing length 17 - 24 mm. Male (Figs. XX - XX; XX - XX; XX - XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX - XXX) - Tegumen narrowed caudad, with uncus bifid.

Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX - XXX) -

Female genitalia (Figs. XXX - XXX) - Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX - XXX) -

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Polytremis eltola Hewitson, 1869(碎紋孔弄蝶/達邦褐弄蝶/台灣孔弄蝶)

Hesperia eltola Hewitson, 1869; Ill. exot. Butts [5] (*Hesperia* IV): [104], pl. [52], f. 40;

TL: Darjeeling

Ssp. tappana (Matsumura, 1919)

Parnara eltola var. *taiwana* Matsumura, 1919: Thousand Insects Jpn. (Additamenta) 3: 676
()

Specimens examined:

JIAYI [= CHIAYI] Co.: 1 ♀, Zhuqi, Shizhou, 1300m, 29. X. 20069 (Y. F. Hsu).
KAOHSIUNG CITY [= KAOHSIUNG Co.]: 1 ♂, Taoyuan, Fenggangshan, 1300m, 24.
IX. 2007 (Y. F. Hsu& G. P. Su). PINGDONG [= PINGTUNG] Co.: 1 ♀, Wutai,
Wutoushan, 1100-1200m, 11. V. 2007 (L. H. Wang); 1 ♀, same locality, 6. VI. 2009 (Y.
F. Hsu); 1 ♂, Wutai, Yichangshan, 1100-1400m, 15/16. III. 2009 (Y. F. Hsu& H. C.
Huang); 1 ♂, Wutai, 8. IX. 1998, (C. Y. Hung).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX):
Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown
mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect,
1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment
minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs.
Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing
triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at
tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a
dark patch present proximally on forewing. Wing undersides ground color pale brown; a
dark patch present ay tornus of hindwing. A narrow, white, discal line on hindwing. Fringe
brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing
upperside. Female: Body and wing patterns similar to those of male, but creamy white,
semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without
dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid.
Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe
produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla
lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase
slightly longer than aedeagus. Juxa as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae
membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming
a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North
Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan.
(Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

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後記

Genus *Potanthus* Scudder, 1872

Type species: *Hesperia omaha* Edwards, 1863

Diagnostic characters include the followings: 1) Antenna approximately 1/2 forewing costa in length; 2) wings dark brown with yellow or orange markings; 3) sexual brand along vein 1A+2A of forewing upperside of male in most species.

About 35 species are known, mainly distributed in the Oriental region, but extending to western Australian region.

Four species occurs in Taiwan.

Potanthus pava (Fruhstorfer, 1911) (淡色黃斑弄蝶/寬紋黃室弄)

Telicota yojana pava Fruhstorfer, 1911; Dt. ent. Z. Iris 25 (3): 40; TL: Formosa, Chip-
Chip

Specimens examined:

XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♂, Wulai, 9. VI. 1984 (Y. F. Hsu); 1 ♀, same locality, 16. X. 1986 (Y. F. Hsu). TAIZHONG CITY [= TAICHUNG CITY/ TAICHUNG Co.]: 1 ♂, Longjing, Longmujing Trail, 13. IX. 2009 (Y. F. Hsu). TAINAN CITY [= TAINAN Co.]: 1 ♂, Xinhua, Dakeng, 80m, 25. II. 2006 (Y. F. Hsu). KAOHSIUNG CITY [= KAOHSIUNG Co.]: 1 ♂, Tianliao, 100m, 9. IV. 2010 (Y. F. Hsu). YILAN Co.: 1 ♂, Toucheng, Guishan Is., 1. IV. 2005 (H. C. Huang); 1 ♂, same locality, 5/6. XI. 2005 (H. C. Huang); 2 ♂, Same locality, 23. IX. 2006 (H. C. Huang).

HUALIAN [= HUALIEN] Co.: 1 ♂, Shoufeng, Baipaoxi, 11. X. 2008 (C. C. Lu jr).
 TAIDONG [= TAITUNG] Co.: 1 ♂, Lanyu, Chinjantung(未知地點), 20. I. 1990 (C. F. Lee); 1 ♀, Lanyu, Badai Bay, 3/4. VII. 1998 (C. C. Lu); 1 ♀, Lanyu, 15. VII. 1999 (C. Y. Hung); 1 ♀, Lanyu, Sidaogou, 13/15. VI. 2003 (Y. F. Hsu); 1 ♂, 1 ♀, 6/8. VIII. 2003 (Y. F. Hsu, C. C. Hsieh& Y. J. Yang); 1 ♂, same locality, 17. VIII. 2003 (Y. H. Lee); 1 ♂, 1 ♀, Same locality, 28/29. IX. 2003 (Y. F. Hsu); 2 ♂, same locality, 18/20. III. 2006 (Y. F. Hsu& H. C. Huang); 2 ♂, same locality, 18. IV. 2006 (Y. F. Hsu); 1 ♂, same locality, 3/5. III. 2007 (Y. F. Hsu& H. C. Huang); 2 ♂, 2 ♀, same locality, 17/18. XI. 2007 (Y. F. Hsu& C. C. Hsieh); 1 ♂, same locality, 18. VIII. 2008 (Y. F. Hsu); 1 ♂, 1 ♀, same locality, 16/18. III. 2012 (Y. F. Hsu& H. C. Huang); 1 ♂, Ludao, 25/27. IX. 2004 (Y. F. Hsu& H. C. Huang); 1 ♀, same locality, 25/27. IX. 2004, reared from *Miscanthus* sp., emgd. 14. X. 2004, HSU 04J44.1 (Y. F. Hsu& H. C. Huang); 1 ♀, Lanyu, Qiwei, 6/8. VIII. 2003 (Y. F. Hsu, C. C. Hsieh& Y. J. Yang); 1 ♂, Lanyu, 20. VIII. 2008 (Y. F. Hsu); 1 ♂, Daren, Senyong, IV. 2000 (C. L. Tang); 1 ♀, Dawu, Dawu, 30. X. 1993 (S. H. Yen); 1 ♂, Yenping, Taoyuan, 15. V. 1988 (Y. F. Hsu& T. H. Li).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX):
 Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae

membraneous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight. 雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

***Potanthus confucius* (黃斑弄蝶/台灣黃斑弄蝶/孔子黃室弄蝶)**

Pamphila confucius C. & R. Felder, 1862; Wien. ent. Monats. 6 (1): 29; TL: Ning Po, China

Ssp. *angustatus* Matsumura, 1910

Augiades dara var. *angustata* Matsumura, 1910; Ent. Zs. 23 (41) (41): 181

Specimens examined:

JILONG [= KEELUNG] CITY: 1 ♂, 1 ♀, Jilongyu, 25. IX. 2011 (H. C. Huang); 1 ♂, Longgang Trail, 26. IX. 2006 (Y. F. Hsu). XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♀, Sanxia, Manyueyuan, Fall, 28. V. 1997 (C. C. Lu); 1 ♀, Ruifang, Nanya, 3. VIII. 1993 (S. H. Yen); 1 ♀, same locality, 17. IV. 2002 (H. S. Chuen); 1 ♀, Wulai, 23. XI. 2006 (Y. F. Hsu). TAIPEI CITY: 1 ♂, NTU Campus, 14. IX. 1986 (Y. F. Hsu); 1 ♂, same locality, 21. IX. 1986 (Y. F. Hsu); 1 ♂, same locality, 23. IX. 1987 (Y.

F. Hsu); 1 ♀, same locality, 3. X. 1987 (Y. F. Hsu); 1 ♂, same locality, 1. IX. 1995, (Y. F. Hsu), 1 ♂, Wenshan, Gongguan Campus, NTNU, 22. IX. 2000 (Y. F. Hsu); 1 ♀, same locality, 10. I. 2002, reared from *Paspalum conjugatum*, emgd. 14. III. 2003, HSU 03A20, (H. S. Chuen); 1 ♀, same locality, 28. IX. 2011, reared from *Miscanthus* sp., emgd. 30. IX. 2011, HSU 11J44 (Y. F. Hsu). TAOYUAN CITY [= TAOYUAN Co.]: 1 ♀, Fuxing, Ronghua/ Sule, 13. V. 1987 (Y. F. Hsu); 2 ♂, Longtan, 5. X. 1999 (Y. F. Hsu); 1 ♂, 1 ♀, same locality, 18. IX. 1999 (Y. F. Hsu); 1 ♂, same locality, 27. IX. 2002 (Y. F. Hsu); 1 ♀, Longtan, 245m, 14. IX. 1999 (Y. F. Hsu); 1 ♀, Xinwu, Dongming, 125m, 15. IX. 1999 (Y. F. Hsu & L. H. Wang). TAIZHONG CITY [= TAICHUNG CITY/ TAICHUNG Co.]: 1 ♂, Dongshi, Dongshi Forest Garden, 1. VII. 1996 (Y. F. Hsu); 2 ♂, Longjing, Longmujing Trail, 13. IX. 2009 (Y. F. Hsu). ZHANGHUA [= CHANGHUA] Co.: 1 ♀, Changhua, NCUE, 3. XI. 1996 (C. Y. Hung); 1 ♀, Tianzhong, 18. XI. 1995 (Y. F. Hsu); 1 ♂, same locality, 8. V. 1996 (Y. F. Hsu). JIAYI [= CHIAYI] Co.: 1 ♂, Dapu, Zhutoushan, 300m, 29. X. 2003 (Y. F. Hsu); 1 ♀, Dapu, 21. IX. 2000 (Y. F. Hsu); 1 ♂, Xingang, 10. III. 2007 (Y. F. Hsu); 1 ♂, same locality, 10. V. 2008, reared from *Phragmites vallisneria* [= *Phragmites karka*], emgd. 30. V. 2008, HSU 08E9 (Y. F. Hsu); 2 ♂, Xingang, Yuemei, 12. II. 2006 (Y. F. Hsu); 1 ♀, Xingang, Yuemei, ca 15m, 11. VI. 2007 (Y. F. Hsu); 1 ♂, Fanlu, Chukou, 11. X. 2004 (Y. F. Hsu); 2 ♂, Fanlu, Chukou, ca 350m, 10. X. 2005 (Y. F. Hsu); 1 ♂, same locality, 31. VII. 2005 (J. K. Tung); 2 ♂, Fanlu, Chukou, ca 300m, 4/5. IX. 2004 (R. K. Dong); 1 ♂, Fanlu, Nipusa, 1. I. 2009 (Y. F. Hsu), 1 ♂, Alishan, Shanmei, 30. III. 2008 (Y. F. Hsu); 1 ♂, Zhuqi/ Alishan, Shizhou/ Dabang, 900/1000m, 2. V. 2010 (R. K. Dong & Y. F. Hsu); 1 ♂, Meishan, Ruili, ca 1100m, 30. XI. 2008 (Y. F. Hsu). JIAYI [= CHIAYI] CITY: 1 ♂, Lantan, 10. III. 2008 (R. K. Dong). TAINAN CITY [= TAINAN Co.]: 2 ♂, 1 ♀, Baihe, Zhentoshan, 500m, 4. IX. 2002 (Y. F. Hsu); 4 ♂, 1 ♀, same locality, 17. IX. 2002 (Y. F. Hsu); 1 ♂, same locality, 8. X. 2002 (Y. F. Hsu); 3 ♂, 2 ♀, same locality, 15. X. 2002 (Y. F. Hsu), 1 ♂, Baihe, Zhentoushan, 29. III. 2003, emgd. 23. V. 2003, HSU 03C51 (Y. F. Hsu); 1 ♀, same locality, 28. VIII. 2004, HSU 04H49 (Y. F. Hsu); 2 ♀, same locality, 28. VIII. 2004 (Y. F. Hsu); 1 ♂, 2 ♀, same locality, 10. IX. 2004 (Y. F. Hsu); 1 ♂, same locality, 10. IX. 2004, reared from *Miscanthus* sp., emgd. 25. IX. 2004, HSU 04J7 (Y. F. Hsu); 1 ♀, Baihe, Guanziling, 1. IX. 2007 (R. K. Dong); 6 ♂, Baihe, Guanziling, 300m, 24. IX. 2003 (Y. F. Hsu); 1 ♂, Xinhua, 24. II. 2006 (Y. F. Hsu); 1 ♂, same locality, 9. II. 2007 (Y. F. Hsu); 1 ♂, same locality, 27. IV. 2010 (Y. F. Hsu); 2 ♂, same locality, 27. V. 2010 (Y. F. Hsu); 2 ♂, 2 ♀, Yongkang, Sankandian, 23. I. 2010 (Y. F. Hsu); 1 ♂, Yongkang, 5. IX. 2010 (Y. F. Hsu). KAOHSIUNG CITY [= KAOHSIUNG Co.]: 1 ♀, Shanping/ Nanfengshan, 6. VII. 1989 (C. L. Li); 1 ♂, Maolin, Shanping, 18. II. 1992 (S. H. Yen); 1 ♀, Lake Jinshi, 29. III. 1997 (Y. F. Hsu); 1 ♀, same locality, 22. XI. 1997 (Y. F. Hsu); 1 ♂, 1 ♀, same locality, 19. III. 1999 (S. C. Chen); 1 ♀, Jiaxian, 250m, 29. VI. 2003 (Y.

F. Hsu); 1 ♂, Xiaogang, Dalinpu, 27. XII. 2003 (Y. F. Hsu); 1 ♂, Meinong, Shuangxi, 150m, 8. II. 2006 (Y. F. Hsu); 1 ♂, same locality, 31. XII. 2006 (Y. F. Hsu); 1 ♂, same locality, 22. I. 2007 (Y. F. Hsu). PINGDONG [= PINGTUNG] Co.: 1 ♂, Hengchun, Kending, 16. VII. 1987 (Y. F. Hsu); 1 ♂, Hengchun, Fengchuisha, 2. XII. 1995 (Y. F. Hsu); 1 ♀, Hengchun, Sichongxi, 7. IX. 2000 (Y. F. Hsu); 1 ♀, Fangliao, Yuquan, 19. III. 2006 (Y. F. Hsu); 1 ♀, same locality, 21. I. 2007 (Y. F. Hsu); 1 ♂, Hengchun, Sheding, 22. I. 2007 (Y. F. Hsu); 1 ♀, Wutai, Wutoushan, 1200m, 28/29. IV. 2002 (C. C. Lu& J. L. Huang); 1 ♀, Mudan, Xuhai, 150m, 23. X. 2009 (Y. F. Hsu); 1 ♀, Mudan, Yongjing, 80m, 19. X. 2008 (Y. F. Hsu); 1 ♂, Sandimen, 250m, 10. II. 2007 (Y. F. Hsu). HUALIAN [= HUALIEN] Co.: 1 ♂, Fengbin, Changhongqiao, 21. X. 1996 (Y. F. Hsu). TAIDONG [= TAITUNG] Co.: 2 ♂, Jinfeng, Bilu Spring, 17. X. 2000 (C. C. Lu); 1 ♂, 2 ♀, Yanping, Taoyuan, 15. V. 1988 (Y. F. Hsu& T. H. Li); 1 ♂, Yanping, Hongye, 4. I. 1988 (Y. F. Hsu& T. H. Li); 2 ♂, same locality, 6. II. 1988 (Y. F. Hsu& T. H. Li); 1 ♀, same locality, 7. II. 1988 (Y. F. Hsu& T. H. Li); 2 ♂, same locality, 30. IX. 2000 (Y. F. Hsu); 1 ♂, Ludao, 30. VI. 1986 (Y. F. Hsu); 1 ♂, 3 ♀, same locality, 25/27. IX. 2004 (Y. F. Hsu& H. C. Huang); 1 ♀, same locality, 25/27. IX. 2004, reared from *Miscanthus* sp., emgd. 4. X. 2004, HSU 04J44.1 (Y. F. Hsu& H. C. Huang); 1 ♂, Lanyu, Chinjantung(未知地點), 20. I. 1990 (C. F. Lee); 3 ♀, Lanyu, 24. VII. 1993 (S. H. Yen); 1 ♂, same locality, 24. VIII. 1999, reared from *Miscanthus* sp., emgd. 14. IX. 1999 (C. Y. Hung); 1 ♀, same locality, 24. VIII. 1999 (C. Y. Hung); 1 ♂, 3 ♀, same locality, 21/23. IX. 2008 (H. C. Huang& C. H. Lin jr); 1 ♂, Lanyu, 10K, 12. VIII. 2000 (C. C. Lu); 1 ♀, Lanyu, Langdao, 13/15. VIII. 2002 (Y. F. Hsu); 1 ♂, 1 ♀, Lanyu, Sidaogou, 13/15. VI. 2003 (Y. F. Hsu); 2 ♀, same locality, 6/8. VIII. 2003 (Y. F. Hsu, C. C. Hsieh& Y. J. Yang); 1 ♂, 1 ♀, same locality, 28/29. IX. 2003 (Y. F. Hsu); 1 ♂, same locality, 18/20. III. 2006 (Y. F. Hsu& H. C. Huang); 2 ♂, 1 ♀, same locality, 18. IV. 2006 (Y. F. Hsu); 2 ♂, same locality, 17/18. XI. 2007 (Y. F. Hsu& C. C. Hsieh); 2 ♀, Lanyu, Badai Bay, 3/4. VII. 1998 (C. C. Lu); 2 ♂, 1 ♀, Lanyu, Langtaoyu(?), 18/22. VIII. 1998 (C. C. Lu& C. Y. Hung); 1 ♂, 1 ♀, Lanyu, Qiwei, 6/8. VIII. 2003 (Y. F. Hsu, C. C. Hsieh& Y. J. Yang); 3 ♂, Taitung, Pipa Lake, 4. VI. 2006 (Y. F. Hsu). NANTOU Co.: 1 ♀, Ren' ai, Ruru Skpite, 23. XI. 1996 (Y. F. Hsu); 1 ♂, Ren' ai, Huisun, 30. XI. 1996 (Y. F. Hsu); 1 ♂, Ren' ai, Huisun, ca 700m, 14. XI. 2004 (Y. F. Hsu); 2 ♂, 2 ♀, Ren' ai, Puli, 450m, 4. VI. 1997 (Y. F. Hsu); 1 ♀, Yuchi, Lianhuachi, 5. X. 1997 (C. C. Lu); 1 ♀, same locality, 17. IX. 2000 (Y. F. Hsu); 1 ♂, same locality, 21. XI. 2001 (Y. F. Hsu& H. Chiba); 1 ♂, Yuchi, Lianhuachi, 550m, 8. X. 2002 (Y. F. Hsu). LIANJIANG [= LIENCHIANG] Co.: 1 ♀, Beigan, Tangqi, 27. VII. 2000, reared from *Panicum* sp., emgd. 5. IX. 2000, HSU 00G45 (Y. F. Hsu)

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Potanthus motzui Hsu, Li & Li, 1990 墨子黃斑弄蝶/細帶黃斑弄蝶

Potanthus motzui Hsu, Li & Li, 1990: Journal of Taiwan Museum 43(1): 3 (Type locality: TAIPEI, Wulai)

Specimens examined:

XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♂, Xindian, Guangxing, 22. V. 2004, reared from Paspalum?, 15. VI. 2004, HSU 04E70 (L. H. Wang); 2 ♂, Xindian, Sikanshui, 200m, 13. X. 2008 (Y. F. Hsu); 1 ♂, Wulai, 22. II. 2000, reared from *Setaria palmifolia* (L. H. Wang); 1 ♂, same locality, 19. V. 2004, reared from *Digitaria* sp., emgd. 10. VI. 2004, HSU 04E55 (L. H. Wang); 1 ♂, same locality, 12. V. 2006 (Y. F. Hsu); 1 ♂, Wulai, Fushan, Kalamoji, 14. VII. 2004 (Y. F. Hsu); 1 ♂, Wulai, Tonghou Forest Trail, 8. VI. 2004, reared from *Setaria palmifolia*, emgd. 30. IV. 2003, HSU 04F16 (L. H. Wang). TAIPEI CITY: 1 ♂, Shilin, Yangmingshan, 2. VIII. 2011 (H. C. Huang); 1 ♂, Wenshan, Xianjiyan, 21. V. 2004 (P. Loh). TAOYUAN CITY [= TAOYUAN Co.]: 1 ♂, Fuxing, Sileng, 7. X. 2000 (Y. F. Hsu); 1 ♂, Longtan, 2. X. 1999 (S. H. Yen); 1 ♂, Longtan, 350m, 7. VI. 2002, (Y. F. Hsu); 1 ♂, Fuxing, Daman, 26. V. 2002 (Y. F. Hsu). TAIZHONG CITY [= TAICHUNG CITY/ TAICHUNG Co.]: 1 ♀, Heping, Guguan, 1000m, 1. X. 1995 (Y. F. Hsu); 1 ♀, Heping, Shangguguan, 900/1200m, 28. VII. 2007 (Y. F. Hsu). JIAYI [= CHIAYI] Co.: 1 ♂, 1 ♀, Dapu, Zhutoushan, 300m, 29. X. 2003 (Y. F. Hsu); 1 ♂, same locality, 10. XI. 2003 (Y. F. Hsu); 1 ♂, Fanlu, Chukou, 11. X. 2004 (Y. F. Hsu); 1 ♂, 2 ♀, Fanlu, Chukou, ca 300m, 4/5. IX. 2004 (R. K. Dong); 1 ♂, same locality, 18. IX. 2004 (R. K. Dong); 1 ♂, Fanlu, Chukou, ca 350m, 31. VII. 2005 (J. K. Tung); 1 ♂, 1 ♀, same locality, 10. X. 2005 (Y. F. Hsu); 3 ♂, 1 ♀, Alishan, Shanmei, 500m, 30. III. 2008 (Y. F. Hsu); 1 ♀, Alishan, Shanmei, ca 700m, 14. IV. 2009 (Y. F. Hsu); 2 ♂, 1 ♀, Zhuqi/ Alishan, Shizhou/ Dabang, 900/1000m, 2. V. 2010 (R. K. Dong & Y. F. Hsu). TAINAN CITY [= TAINAN Co.]: 1 ♂, Baihe, Zhentoushan, 500m, 4. IX. 2002 (Y. F. Hsu); 1 ♂, same locality, 8. X. 2002 (Y. F. Hsu); 1 ♂, Baihe, Zhentoushan, 28. VIII. 2004 (Y. F. Hsu); 1 ♀, same locality, 10. IX. 2004, HSU 04J12 parent (Y. F. Hsu). KAOHSIUNG CITY [= KAOHSIUNG Co.]: 1 ♂, Meinong, Shuangxi, 150m, 22. I. 2007 (Y. F. Hsu); 1 ♂, Taoyuan, Fenggangshan, 900m, 30. I. 2008 (Y. F. Hsu); 2 ♂, Taoyuan, Fenggangshan, 700m, 30. I. 2008 (Y. F. Hsu); 2 ♂, 1 ♀,

Maolin, Shanping, 18. II. 1992 (S. H. Yen). PINGDONG [= PINGTUNG] Co.: 1 ♀, Wutai, Wutoushan, 9. IV. 1999 (Y. F. Hsu); 1 ♂, Shizi, Lilongshan, 500m, 17. II. 2008 (Y. F. Hsu); 1 ♂, Shizi, Shuangliu, 200/400m, 30. IV. 2006 (Y. F. Hsu). HUALIAN [= HUALIEN] Co.: 1 ♂, Xiulin, Longxi/ Longjian, 10. VII. 1991 (Y. F. Hsu); 1 ♂, Xiulin, Taroko, 22. VII. 2005 (Y. F. Hsu); 3 ♂, 2 ♀, Xiulin, Huitouwan, ca 800m, 23. VII. 2005 (Y. F. Hsu); 1 ♂, Xiulin, Huoran Pavilion/ Huejiachang, 9. VII. 1991 (Y. F. Hsu). TAIDONG [= TAITUNG] Co.: 2 ♂, 2 ♀, Chihpen(未知地點), 500m (Y. F. Hsu); 2 ♂, Ludao, 31. X. 1993 (S. H. Yen); 1 ♂, Jinfeng, Bilu Spring, 17. X. 2000 (C. C. Lu); 1 ♂, Yanping, Hongye, 5. X. 1997 (Y. F. Hsu); 1 ♂, Donghe, Donghe Fram, 350m, 16. X. 2007 (Y. F. Hsu). NANTOU Co.: 1 ♀, Lugu, Fonghuanggu Bird and Ecology Park, 10. XII. 1995 (C. C. Lu); 1 ♂, same locality, 10. VII. 1996 (Y. F. Hsu); 1 ♀, same locality, 27. VII. 1996 (Y. F. Hsu); 1 ♀, same locality, 7. IX. 1996 (Y. F. Hsu); 2 ♂, 3 ♀, same locality, 23. XI. 1996 (Y. F. Hsu); 1 ♂, same locality, 26. V. 1997 (Y. F. Hsu); 1 ♂, Yuchi, Lianhuachi, 17. IX. 2000 (Y. F. Hsu); 1 ♂, Yuchi, Lianhuachi, 700m, 21. VIII. 2002 (Y. F. Hsu); 1 ♀, Renai, Songgang, 5. IX. 1993 (S. H. Yen); 1 ♂, Renai, Hewang, 16. X. 1993 (S. H. Yen); 1 ♂, Renai, Huisun, 30. XI. 1996 (Y. F. Hsu); 1 ♂, Renai, Huisun, ca 700m, 14. XI. 2004 (Y. F. Hsu); 2 ♂, 2 ♀, Renai, Nanshanxi, ca 900m, 1. IX. 2007 (Y. F. Hsu); 3 ♂, same locality, 23. I. 2008 (Y. F. Hsu); 1 ♂, 1 ♀, Renai, Huisun Forestry Station, 16. X. 2010 (Y. F. Hsu).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla

lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Potanthus diffusus Hsu, Chiba & Tsukiyama, 2005(蓬萊黃斑弄蝶)

Potanthus diffusus Hsu, Chiba & Tsukiyama: Insect Syst. Evol. 36: 176, f. 1-10; TL: Taiwan, Hualian Co., Xiulin Qilai, ca. 1400m

Specimens examined:

" NEW TAIPEI City" [TAIPEI Co.]: 1 ♂, Wulai, Fushan, 15. IV. 2005 (Y. F. Hsu). " TAOYUAN City" [TAOYUAN Co.]: 1 ♀, Fuxing, Xuanyuan, ca 1000m, 7. V. 1997 (paratype) (Y. F. Hsu). HSINCHU Co.: 1 ♀, Jianshi, Lidongshan, 1550m, 13. VI. 2004 (paratype) (H. C. Huang& L. Huang). " TAICHUNG City" [TAICHUNG Co.]: 1 ♂, Heping, Guguan, 11. V. 1991 (paratype) (Y. F. Hsu); 1 ♂, Heping, Guguan, ca 1000m,

12. VI. 199, (paratype) (Y. F. Hsu). JIAYI [= CHIAYI] Co.: 1 ♂, Fanlu, Gongtian(公田在梅山, 番路是小公田), 8. VIII. 2004 (paratype) (R. K. Dong); 2 ♂, 1 ♀, Fanlu, Chukou, ca 300m, 28. IX. 2004 (R. K. Dong); 1 ♂, same locality, 29. VIII. 2008 (Y. F. Hsu); 2 ♂, Fanlu, Chukou, ca 350m, 31. VII. 2005 (J. K. Tung); 1 ♂, 1 ♀, same locality, 25. IX. 2005 (Y. F. Hsu); 1 ♂, same locality, 10. X. 2005 (Y. F. Hsu); 1 ♀, same locality, 1. V. 2006 (Y. F. Hsu); 2 ♂, Alishan, Shanmei, 30. III. 2008 (Y. F. Hsu); 2 ♀, Meishan, Ruili, 900m, 30. XI. 2008 (Y. F. Hsu). PINGDONG [= PINGTUNG] Co.: 1 ♀, Wutai, Wutoushan, 1200m, 10/11. IV. 1998 (paratype) (Y. F. Hsu); 1 ♂, Wutai, Wutoushan, 9. IV. 1999 (paratype) (Y. F. Hsu); 2 ♂, Wutai, Wutoushan, 1000/1200m, 7/8. V. 2006 (Y. F. Hsu); 1 ♀, Wutai, Ailiaobeixi/ Bayouxi, 500/900m, 14. III. 2008 (Y. F. Hsu & H. C. Huang). HUALIAN [= HUALIEN] Co.: 1 ♂, Xiulin, Qilai, ca 1400m, 11. VII. 1991 (paratype) (Y. F. Hsu); 1 ♀, Xiulin, Tongmen, Qilai Forest Trail, 1500m, reared from *Miscanthus sinensis*, emgd. 21. III. 2007, HSU 07A11 (L. H. Wang); 1 ♀, Xiulin, Xinbaiyang, ca 1700m, 20. VII. 2007 (Y. F. Hsu). TAIDONG [= TAITUNG] Co.: 1 ♀, Yanping, Hongye, 500m, 15. V. 1988 (paratype) (Y. F. Hsu); 1 ♀, Yanping, Hongye, 8. IX. 2000 (paratype) (Y. F. Hsu). NANTOU Co.: 1 ♂, Renai, Huisun, ca 700m, 14. XI. 2004 (Y. F. Hsu); 1 ♂, Renai, Beidongyanshan, ca 1800m, 6. XII. 2005, reared from *Miscanthus sinensis*, emgd. 7. II. 2006, HSU 05M17 (Y. F. Hsu).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase

slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Genus *Pseudoborbo* Lee, 1966

Type species: *Hesperia borbonica* Boisduval, 1833

Diagnostic characters include the followings: 1) wings brown with hyaline spots; antenna 1/2 forewing costa in length; 3) mesotibia without spines or spines poorly developed; 3) no sexual brand.

About 20 species, mainly distributed in the Afrotropical region, but also in the Oriental and Australian region.

1 species occur in Taiwan.

Pseudoborbo bevani (Moore, 1878) (假禾弄蝶/小紋褐弄蝶/擬仙弄蝶)

Hesperia bevani Moore, 1878; Proc. zool. Soc. Lond. 1878 (3): 688; TL: Salween,

Moulmein, Burma

Isoetes modesta Moore, [1884]; Proc. zool. Soc. Lond. 1883 (4): 534; TL: Coonoor, Nilgiris

Hesperia vaika Plötz, 1886

Pamphila sarus Mabille, 1891; Bull. Soc. Ent. Belg. 35 (18): clxxx; TL: Chaata

Parnara thyone Leech, [1893]; Butts China Japan Corea (2): 610

Specimens examined:

TAIZHONG CITY [= TAICHUNG CITY/ TAICHUNG Co.]: 1 ♀, Qingshui, 6. VIII. 2004 (D C. Chen); 5 ♂, 1 ♀, Heping, Shangguguan, 900/1200m, 28. VII. 2007 (Y. F. Hsu); 1 ♂, Heping, Shanggiguan, 900m, 29. VII. 2007 (Y. F. Hsu). NANTOU Co.: 1 ♂, Songgang, 28. VII. 1986 (Y. F. Hsu); 2 ♂, Ren' ai, Huisun, ca 770m, 1. XII. 1997 (Y. F. Hsu); 4 ♂, 2 ♀, Renai, Huisun, ca 700m, 14. XI. 2004 (Y. F. Hsu); 4 ♂, Renai, Huisun, ca 600m, 22. XI. 2004 (Y. F. Hsu); 1 ♀, Renai, Huisun Forestry Station, 16. X. 2010 (Y. F. Hsu); 1 ♂, Ren' ai, Nanshanxi, 11. I. 2000 (C. Y. Hung); 1 ♂, Renai, Nanshanxi, ca 900m, 1. IX. 2007 (Y. F. Hsu).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present ay tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxa as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.
雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Genus *Pseudocoladenia* Shirôzu & Saigusa, 1962

Type species: *Coladenia dan fabia* Evans, 1949

Diagnostic characters include the followings: 1) wings brown with hyaline white or yellow spots on forewing; 2) male with metatibial hair tuft.

Number of species ranges from one to several according to different authors.

One species occurs in Taiwan.

Pseudocoladenia dan (Fabricius, 1787)(黃襟弄蝶/八仙山弄蝶)

Papilio dan Fabricius, 1787; *Mantissa Insectorum* 2: 88, no. 798; TL: Tranquebar, S.India

Coladenia dan lumbokiana Fruhstorfer, 1909; *Ent. Zs.* 23 (31): 138; TL: Lombok

Coladenia dan sumbawana Fruhstorfer, 1909; *Ent. Zs.* 23 (31): 138; TL: Sumbawa

Coladenia dan celebica Fruhstorfer, 1909; *Ent. Zs.* 23 (31): 138; TL: S.Celebes

Ssp. *sadakoe* Sonan & Mitono, 1936

Coladenia sadakoe Sonan & Miltono, 1936; Zephyrus 6: 184; TL: Formosa

Figs. XX – XX, XXX, XXX.

Ssp. *fabia* Evans, 1949

Coladenia dan fabia Evans, 1949; Cat. Hesp. Europe Asia Australia Brit. Mus.: 113; TL: Assam, Margherita

Figs. XX – XX, XXX, XXX.

Specimens examined:

Ssp. *sadakoe*: MIAOLI Co.: 1 ♂, 1 ♀, Tai' an, Henglongshan, 1340/1430m, 24. I. 2003, reared from *Achyranthes bidentata* var. *japonica*, emgd. 21. III. 2003, HSU 03A40 (Y. F. Hsu, S. C. Chen, C. C. Lu& J. R. Chen); 5 ♂, 5 ♀, same locality, 1340/1430m, 26. I. 2003, reared from *Achyranthes bidentata* var. *japonica*, emgd. 21/31. III. 2003, HSU 03A47 (Y. F. Hsu, S. C. Chen, C. C. Lu& J. R. Chen); 1 ♂, Tai' an, Henglongshan, ca1200m, VI. 2003, reared from *Achyranthes bidentata*, emgd. 5. VIII. 2003, HSU 03F28.2 (C. C. Lu, J. R. Chen, S. C. Chen&Y. C. Yang); 1 ♂, 1 ♀, same locality, 22. X. 2005, reared from *Achyranthes bidentata* var. *japonica*, emgd. 2/6. XII/I. 2005, HSU 05K46 (C. C. Lu, S. C. Chen& C. C. Hsieh)

Ssp. *fabia*: LIANJIANG [= LIENCHIANG] Co.: 2 ♂, 3 ♀, Nangan, Fuao, 14. VI. 2000, reared from *Achyranthes aspera*, emgd. 24/12, VI/VII, 2000, HSU 00F6 (Y. F. Hsu); 1 ♂, 1 ♀, same locality, reared from *Achyranthes aspera*, emgd. 16/2. VIII/IX. HSU 00F43 (Y. F. Hsu); 1 ♂, same locality, 26. VII. 2000, reared from *Achyranthes aspera*, HSU 00G42, emgd. 15. VIII. 2000 (Y. F. Hsu); 1 ♂, same locality, 27. VII. 2000, reared from *Achyranthes aspera*, HSU 00G43, emgd. 30. VIII. 2000 (Y. F. Hsu); 2 ♂, 1 ♀, Nangan, Bishan, 15. VI. 2000, reared from *Achyranthes aspera*, emgd. 6. VII. 2000, HSU 00F12 (Y. F. Hsu); 2 ♂, 1 ♀, Nangan, 9. VII. 2003, reared from *Achyranthes* sp., 5/7. VII. 2003, HSU 03F60 (Y. A. Lin); 1 ♂, same locality, reared from *Achyranthes* sp., emgd. 5. VIII. 2003, HSU 03G21, (L. W. Wu); 1 ♂, 1 ♀, same locality, 2. V. 2010, *Achyranthes aspera* var. *rubro-fusca*, emgd. 6. VII. 2010, HSU 10F5 (Y. F. Hsu); 1 ♂, same locality, 2. VI. 2010 (Y. F. Hsu); 1 ♂, Nangan, Beihai Tunnel, 28. VI. 2013, reared from *Achyranthes aspera*, emgd. 28. VI. 2013, HSU 13F56 (C. L. Huang& H. Y. Lee).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing

triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Genus *Satarupa* Moore, [1866]

Type species: *Satarupa gopala* Moore, [1866]

Diagnostic characters include the followings: 1) wings brown with hyaline white spots on forewing; 2) forewing with a spot at distal end of discoidal cell; 3) a prominent white patch and small black spots on hindwings; 4) male with recumbent metatibial hair tufts.

6-7 species known, distributed in the Oriental region.

Two species occurs in Taiwan.

Satarupa majasra Fruhstorfer, 1909 (小紋颯弄蝶/大白裙弄蝶)

Satarupa gopala majasra Fruhstorfer, 1909; Ent. Zs. 23 (31): 139; TL: Formosa, Arisan

Specimens examined:

TAOYUAN CITY [= TAOYUAN Co.]: 1 ♂, Fuxing, Daman/Xuanyuan, 14. VI. 1987 (Y. F. Hsu); 1 ♀, Fuxing, Sileng, 1100, 20. V. 2000 (Y. T. Lo); 1 ♂, Fuxing, Daman, 4. VII. 2005 (C. H. Lin jr); 1 ♂, Fuxing, Xicun, 1100m, reared from *Zanthoxylum ailanthoides*, emgd. 15. V. 2009, HSU 09D2 (L. H. Wang& M. S. Sun). XINZHU [= HSINCHU] Co.: 1 ♂, Jianshi, Lidongshan, 1500/1900m, 29/30. V. 2004, reared from *Tetradium glabrifolium*, emgd. 5. VII. 2004 (Y. F. Hsu). YILAN Co.: 1 ♀, Datong, Tuleng, 1600m, 11. VIII. 2009 (Y. F. Hsu). HUALIAN [= HUALIEN] Co.: 1 ♀, Xiulin, Xinbaiyan, 1600/1700m, 8. VII. 2008 (L. H. Wang); 1 ♂, same locality, 30. VI. 2010, (N. Y. Tsai).

Description.

Adult - Forewing length 17 - 24 mm. Male (Figs. XX - XX; XX - XX; XX - XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present ay tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Satarupa formosibia Strand, 1927 台灣颯弄蝶/台灣大白裙弄蝶

Satarupa formosibia Strand, 1927; Arch. Naturg. 91 A (12): 282

Satarupa formosana Matsumura, 1910; Ent. Zs. 23 (41) (41): 181; TL: Formosa

Satarupa formosicola Matsumura, 1929; Ill. comm. Ins. Japan 1: 34

Specimens examined:

TAOYUAN CITY [= TAOYUAN Co.]: 1 ♂, Fuxing, Xuanyuan, 7. V. 2009, reared from *Tetradium glabrifolium*, emgd. 28. V. 2009, HSU 09E31 (C. H. Lin); 1 ♂, 1 ♀, Northern Cross Highway, 30. III. 2012 (J. H. Lin). TAIZHONG CITY [= TAICHUNG CITY/TAICHUNG Co.]: 2 ♀, Heping, Daxueshan, 900m, 25. V. 2010, reared from *Tetradium glabrifolium*, emgd. 7/10. VI. 2010, HSU 10E13 (J. H. Lin). NANTOU Co.: 1 ♀, Ren' ai, Tunyuan, 2000m, 6. VII. 2012 (Y. F. Hsu).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Genus *Seseria* Matsumura, 1919

Type species: *Suastus nigroguttatus* Matsumura, 1910

Diagnostic characters include the followings: 1) wings brown with hyaline white spots on forewing; 2) forewing without spot in discoidal cell; 3) most species with a prominent white patch and small black spots on hindwings; 4) male without recumbent metatibial hair tufts; 5) female with anal hair tuft.

5 species known, distributed in the Oriental region.

One species occurs in Taiwan.

Seseria formosana (Fruhstorfer, 1909) (台灣瑟弄蝶/大黑星弄蝶)

Satarupa formosana Fruhstorfer, 1909; Int. ent. Zs. 3 (27): 149; TL: Formosa, Chip-Chip

Suastus nigroguttatus Matsumura, 1910; Ent. Zs. 23 (41) (41): 181; TL: Formosa (Horisha)

Specimens examined:

TAIPEI CITY: 2 ♂, 1 ♀, Beitou, 15. II. 2009, reared from *Cinnamomum burmannii*, emgd. 5/12. III. 2009, HSU 09B15 (H. C. Huang); 2 ♀, Wenshan, Muzha, Taipei City Zoo, 10. IV. 2009 (Y. F. Hsu); 1 ♀, Songshan, Hushan, 9. IV. 2009 (C. K. Wang).

XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♂, Xindian, Sikanshui, 25. IV. 2003, reared from *Cinnamomum camphora*, emgd. 26. VI. 2003, HSU 03D39 (F. Z.

Lin); 1 ♂, Xindian, Sikanshui, 200/400m, 6. VIII. 2007 (Y. F. Hsu). XINZHU [= HSINCHU] Co.: 1 ♀, Baoshan, Shanhu, 27. XII. 2008, reared from *Cinnamomum burmannii*, emgd. 18. III. 2009, HSU 08M31 (Y. F. Hsu& C. C. Lu jr) KAOHSIUNG CITY [= KAOHSIUNG Co.]: 1 ♀, Maolin, XII. 2008, reared from *Cinnamomum burmannii*, emgd. 23. II. 2008, HSU 08M25 (Y. Feng).

Description.

Adult - Forewing length 17 - 24 mm. Male (Figs. XX - XX; XX - XX; XX - XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX - XXX) - Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX - XXX) -

Female genitalia (Figs. XXX - XXX) - Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX - XXX) -

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Genus *Suastus* Moore, [1881]

Type species: *Papilio folus* Cramer, [1775]

Diagnostic characters include the followings: 1) Third segment of labial palpus long and vertical; 2) R4 and R5 of forewing widely apart distad; 3) Hindwing underside gray with dark spots.

4 species are known, distributed in the Oriental region.

One species occur in Taiwan.

Suastus gremius (Fabricius, 1798) (黑星弄蝶/素弄蝶)

Hesperia gremius Fabricius, 1798; Ent. Syst. (Suppl.): 433, no. 282-3; TL: India

Specimens examined:

JILONG [= KEELUNG] City: 1 ♀, Jilongyu, 25. IX. 2011 (H. C. Huang). XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♀, Shiding, Ergeshan, 1. X. 2008 (C. H. Lin jr); 1 ♂, Xindian, Sikanshui, 13. X. 2008 (Y. F. Hsu). TAIPEI CITY: 1 ♂, Wenshan, Jingmei, 25. I. 2008, reared from *Rhapis humilis*, emgd. 12. II. 2008, HSU 08A24 (Y. F. Hsu); 1 ♂, same locality, 9. IX. 2008, reared from *Rhapis excelsa*, emgd. 13. IX. 2008, HSU 08J27 (Y. F. Hsu); 1 ♂, 1 ♀, same locality, 26. XII. 2008, reared from *Rhapis excelsa*, emgd. 10/16. I. 2009, HSU 08M40 (Y. F. Hsu); 1 ♂, Wenshan, Gongguan Campus, NTNU, 10. XI. 2005 (J. R. Chen); 1 ♀, same locality, 19. XI. 2005 (J. R. Chen); 2 ♂, 2 ♀, same locality, 26. X. 2008 (Y. F. Hsu); 1 ♂, 31. I. 2000 (C. Y. Hung). TAINAN CITY [= TAINAN Co.]: 1 ♀, Xinhua, 1. VII. 2010 (J. H. Lin). JINMEN [=

KINMEN] Co.: 1 ♂, Jinsha, Forestry Institute, 29. V. 2011 (H. C. Huang); 2 ♂, 1 ♀, Jinhua, Shanwai, 4. XI. 2015 (L. Huang).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Genus *Tagiades* Hübner, 1903

Type species: *Papilio japetus* Stoll, [1781]

Diagnostic characters include the followings: 1) wings brown with small hyaline white spots on forewing; 2) a white patch present on hindwing; 4) male without recumbent metatibial hair tufts; 5) female with anal hair tuft.

12 species known, distributed in the Oriental region.

Two species occurs in Taiwan.

Tagiades cohaerens Mabille, 1914 (白裙弄蝶)

Tagiades menaka var. *cohaerens* Mabille, 1914; Suppl. ent. 3: 42

Specimens examined:

YILAN Co.: 1 ♂, Nan' ao, Jinchaoshan, 1100m, 29. VI. 2001 (Y. F. Hsu& C. C. Lu).

XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♀, Sanxia, Manyueyuan, 5. VI.

1999 (Y. T. Lo); 1 ♀, Wulai, Fushan, 17. III. 2009 (C. K. Wang); 1 ♂, same locality, 21.

III. 2009 (C. H. Yen); 1 ♂, Xindian, Sikanshui, 30. IV. 2006, reared from *Dioscorea* sp.,

emgd. 10. V. 2006, HSU 06D68 (L. H. Wang). XINZHU [= HSINCHU] Co.: 1 ♂,

Wufeng, Dalu Forest Trail, 15km, 1500/1600m, 13. VIII. 2002 (Y. F. Hsu). PINGDONG

[= PINGTUNG] Co.: 1 ♂, Wutai, Wutoushan, 1200/1300m, 8. IX. 1998 (Y. F. Hsu)

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX):

Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown

mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect,

1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment

minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs.

Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Tagiades trebellius (Hopffer, 1874)(熱帶白裙弄蝶/蘭嶼白裙弄蝶)

Pterygospidea trebellius Hopffer, 1874; Stettin ent. Ztg 35 (1-3): 41; TL: Celebes

Tagiades mitra avathana Fruhstorfer, 1910; Dt. ent. Z. Iris 24 (5): 79; TL: Sula-Besi

Tagiades martinus[?] *nicaja* Fruhstorfer, 1910; Dt. ent. Z. Iris 24 (5): 80; TL: Bazilan

Ssp. *martinus* Plötz, 1884

Specimens examined:

YILAN Co.: 1 ♀, Toucheng, Guishan Is., 15. VI. 2007 (H. C. Huang). PINGDONG [= PINGTUNG] Co.: 1 ♂, Shizi, Lilongshan, 500m, 25. VIII. 2007 (Y. F. Hsu). TAIDONG [= TAITUNG] Co.: 2 ♀, Lanyu, 25. IV. 2010, reared from *Dioscorea cumingii*, emgd. 23. VI. 2010, HSU 10D47 (J. H. Lin); 1 ♂, Lanyu, Sidaogou, 13/15. VI. 2003 (Y. F. Hsu); 1 ♀, same locality, 18. IV. 2006 (Y. F. Hsu); 1 ♂, sam locality, 14/16. X. 2006 (Y. F. Hsu & H. C. Huang); 2 ♀, Lanyu, Qiwei, 26. IV. 2009, reared from *Dioscorea cirrhosa* [= *Dioscorea matsudae*], emgd. 16/17. V. 2009, HSU 09D57 (C. L. Lin jr); 1 ♂, Lanyu, Tianchi, 25. IV. 2006, reared from *Dioscorea ?collettii*, emgd. 16. V. 2006, HSU 06D63 (S. N. Hung).

Description.

Adult - Forewing length 17 - 24 mm. Male (Figs. XX - XX; XX - XX; XX - XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present ay tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX - XXX) - Tegumen narrowed caudad, with uncus bifid.

Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe

produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Genus *Telicota* Moore, [1881]

Type species: *Papilio colon* Fabricius, 1775

Diagnostic characters include the followings: 1) wings dark brown with yellow or orange markings; 2) uncus deeply divided; 3) discal sexual brand on forewing upperside of male.

About 31 species, distributed in the Oriental and Australian region.

Three species occur in Taiwan.

Telicota bambusae (竹橙斑弄蝶/埔里紅弄蝶/紅翅長標弄蝶)

Pamphila bambusae Moore, 1878; Proc. zool. Soc. Lond. 1878 (3): 691, pl. 45, f. 11-12;
TL: "Calcutta"

Ssp. *horisha* Evans, 1934

Telicota ancilla horisha Evans, 1934; Entomologist 67 (9): 208; TL: Formosa

Specimens examined:

XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♀, Wulai, 23. IX. 1987 (Y. F. Hsu); 1 ♂, 1 ♀, same locality, 8. XI. 1987 (Y. F. Hsu); 1 ♂, same locality, emgd. 28. XII. 1987 (Y. F. Hsu); 1 ♂, same locality, 7. XI. 2000, reared from *Setaria palmifolia*, emgd. 4. XII. 2000, HSU 00L2 (Y. F. Hsu); 1 ♂, Wulai, ca 200m, 19. X. 2009 (Y. F. Hsu); 3 ♀, Chenggong/ Wulai, 21. XI. 1987 (Y. F. Hsu); 1 ♂, 1 ♀, Chenggong, 25. XI. 1987 (Y. F. Hsu). TAIPEI CITY: 1 ♂, NTU, 12. IX. 1987 (Y. F. Hsu); 1 ♀, same locality, 23. IX. 1987 (Y. F. Hsu); 1 ♂, Beitou, Junjian Yan, 5. V. 2003, reared from *Setaria palmifolia*, emgd. 23. V. 2003 (H. S. Que); 1 ♂, Wenshan, Xianjiyan, 27. VIII. 2012, reared from *Pennisetum purpureum*, emgd. 11. IX. 2012, HSU 12H51 (Y. F. Hsu). TAOYUAN CITY [= TAOYUAN Co.]: 1 ♀, Fuxing, Ronghua/Gaoyi, 1. IX. 1987 (Y. F. Hsu); 1 ♂, Longtan, 18. IX. 1999, reared from *Pennisetum purpureum*, emgd. 20. XI. 1999, HSU 99J55 (Y. F. Hsu); 1 ♂, Same locality, 7. IV. 2002 (Y. F. Hsu); 1 ♀, Fuxing, Xikoutai Bridge 2, 25. VIII. 2003, HSU 03H12 (L. W. Wu). TAIZHONG CITY [= TAICHUNG CITY/ TAICHUNG Co.]: 1 ♀, Shishanxi, 5. IX. 1996 (C. Y. Hung). CHIAYI Co.: 2 ♂, Fanlu, Chukou, 350m, 10. X. 2005 (Y. F. Hsu); 1 ♀, same locality, 30. VIII. 2008 (Y. F. Hsu); 1 ♂, Alishan, Shanmei, 30. III. 2008 (Y. F. Hsu). " TAINAN City"[TAINAN Co.]: 1 ♀, Guantian, Wushantou, 150m, 22. I. 2007, reared from *Pennisetum purpureum*, emgd. 16. III. 2007, 07A32 (Y. F. Hsu). KAOHSIUNG CITY [= KAOHSIUNG Co.]: 1 ♀, Liugui, 300m, 22. I. 2008 (Y. F. Hsu); 1 ♂, Tianliao, 100m, 27. IV. 2010 (Y. F. Hsu). PINGDONG [= PINGTUNG] Co.: 1 ♀, Hengchun, Kending, 17. VII. 1987 (Y. F. Hsu); 1 ♂, Jiudawu, 1000m, 14/16. II. 2000, emgd. 23. III. 2000 (Y. T. Lo). YILAN Co.: 1 ♀, Toucheng, Guishan Is., 4/5. III. 2006 (H. C. Huang& C. L. Huang). HUALIAN [= HUALIEN] Co.: 1 ♀, Fengbin, Changhongqiao, 7. XI. 1995, reared from *Panicum repens*, emgd. 23. XI. 1995, HSU 95L5 (Y. F. Hsu); 1 ♂, 1 ♀, same locality, 21. X. 1996 (Y. F. Hsu). TAIDONG [= TAITUNG] Co.: 1 ♀, Taoyuan, 15. V. 1988 (Y. F. Hsu). NANTOU Co.: 1 ♂, Lugu, Fonghuanggu Bird and Ecology Park, 23. XI. 1996, reared from *Setaria palmifolia*, emgd. 19. XII. 1996, HSU 96L26 (Y. F. Hsu); 1 ♂, same locality, 29. XII. 1996, reared from *Setaria palmifolia*, emgd. 2. II. 1997, HSU 96M30 (C. Y. Hung); 1 ♂, Lugu, Xitou, Yushuikeng, 3. VI. 1997, reared from *Setaria palmifolia*, emgd. 21. VI. 1997, HSU 97F12 (C. C. Lu); 1 ♀, Renai, Nanshanxi, 900m,

23. I. 2008 (Y. F. Hsu); 1 ♂ , Ren' ai, Huisun, 30. XI. 1996, reared from *Setaria palmifolia*, emgd. 6. I. 1997, HSU 96L48 (Y. F. Hsu).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Telicota ohara (Plötz, 1883) (寬邊橙斑弄蝶/竹紅弄蝶/黃紋長標弄蝶)

Hesperia ohara Plötz, 1883; Stett. ent. Ztg 44 (4-6): 226

Ssp. *formosana* Fruhstorfer, 1911

Telicota bambusae formosana Fruhstorfer, 1911; Dt. ent. Z. Iris 25 (3): 29; TL: Formosa

Specimens examined:

XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♀, Wulai, 23. IX. 1987 (Y. F. Hsu); 1 ♂, 1 ♀, same locality, 8. XI. 1987 (Y. F. Hsu); 1 ♂, same locality, emgd. 28. XII. 1987 (Y. F. Hsu); 1 ♂, same locality, 7. XI. 2000, reared from *Setaria palmifolia*, emgd. 4. XII. 2000, HSU 00L2 (Y. F. Hsu); 1 ♂, Wulai, ca 200m, 19. X. 2009 (Y. F. Hsu); 3 ♀, Chenggong/ Wulai, 21. XI. 1987 (Y. F. Hsu); 1 ♂, 1 ♀, Chenggong, 25. XI. 1987 (Y. F. Hsu). TAIPEI CITY: 1 ♂, NTU, 12. IX. 1987 (Y. F. Hsu); 1 ♀, same locality, 23. IX. 1987 (Y. F. Hsu); 1 ♂, Beitou, Junjian Yan, 5. V. 2003, reared from *Setaria palmifolia*, emgd. 23. V. 2003 (H. S. Que); 1 ♂, Wenshan, Xianjiyan, 27. VIII. 2012, reared from *Pennisetum purpureum*, emgd. 11. IX. 2012, HSU 12H51 (Y. F. Hsu). TAOYUAN CITY [= TAOYUAN Co.]: 1 ♀, Fuxing, Ronghua/Gaoyi, 1. IX. 1987 (Y. F. Hsu); 1 ♂, Longtan, 18. IX. 1999, reared from *Pennisetum purpureum*, emgd. 20. XI. 1999, HSU 99J55 (Y. F. Hsu); 1 ♂, Same locality, 7. IV. 2002 (Y. F. Hsu); 1 ♀, Fuxing, Xikoutai Bridge 2, 25. VIII. 2003, HSU 03H12 (L. W. Wu). TAIZHONG CITY [= TAICHUNG CITY/ TAICHUNG Co.]: 1 ♀, Shishanxi, 5. IX. 1996 (C. Y. Hung). CHIAYI Co.: 2 ♂, Fanlu, Chukou, 350m, 10. X. 2005 (Y. F. Hsu); 1 ♀, same locality, 30. VIII. 2008 (Y. F. Hsu); 1 ♂, Alishan, Shanmei, 30. III. 2008 (Y. F. Hsu). " TAINAN City"[TAINAN Co.]: 1 ♀, Guantian, Wushantou, 150m, 22. I. 2007, reared from *Pennisetum purpureum*, emgd. 16. III. 2007, 07A32 (Y. F. Hsu). KAOHSIUNG CITY [= KAOHSIUNG Co.]: 1 ♀, Liugui, 300m, 22. I. 2008 (Y. F. Hsu); 1 ♂, Tianliao, 100m,

27. IV. 2010 (Y. F. Hsu). PINGDONG [= PINGTUNG] Co.: 1 ♀, Hengchun, Kending, 17. VII. 1987 (Y. F. Hsu); 1 ♂, Jiudawu, 1000m, 14/16. II. 2000, emgd. 23. III. 2000 (Y. T. Lo). YILAN Co.: 1 ♀, Toucheng, Guishan Is., 4/5. III. 2006 (H. C. Huang& C. L. Huang). HUALIAN [= HUALIEN] Co.: 1 ♀, Fengbin, Changhongqiao, 7. XI. 1995, reared from *Panicum repens*, emgd. 23. XI. 1995, HSU 95L5 (Y. F. Hsu); 1 ♂, 1 ♀, same locality, 21. X. 1996 (Y. F. Hsu). TAIDONG [= TAITUNG] Co.: 1 ♀, Taoyuan, 15. V. 1988 (Y. F. Hsu). NANTOU Co.: 1 ♂, Lugu, Fonghuanggu Bird and Ecology Park, 23. XI. 1996, reared from *Setaria palmifolia*, emgd. 19. XII. 1996, HSU 96L26 (Y. F. Hsu); 1 ♂, same locality, 29. XII. 1996, reared from *Setaria palmifolia*, emgd. 2. II. 1997, HSU 96M30 (C. Y. Hung); 1 ♂, Lugu, Xitou, Yushuikeng, 3. VI. 1997, reared from *Setaria palmifolia*, emgd. 21. VI. 1997, HSU 97F12 (C. C. Lu); 1 ♀, Renai, Nanshanxi, 900m, 23. I. 2008 (Y. F. Hsu); 1 ♂, Ren' ai, Huisun, 30. XI. 1996, reared from *Setaria palmifolia*, emgd. 6. I. 1997, HSU 96L48 (Y. F. Hsu).

Description.

Adult - Forewing length 17 - 24 mm. Male (Figs. XX - XX; XX - XX; XX - XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX - XXX) - Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX - XXX) -

Female genitalia (Figs. XXX - XXX) - Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Telicota colon (Fabricius, 1775) 熱帶橙斑弄蝶/熱帶紅弄蝶/長標弄蝶

Papilio colon Fabricius, 1775; Syst. Ent.: 531, no. 376; TL: India

Ssp. *hayashikeii* Tsukiyama, Chiba & Fujioka, 1997

Telicota ancilla horisha Evans, 1934; Entomologist 67 (9): 208; TL: Formosa

Specimens examined:

XINBEI CITY [= NEW TAIPEI CITY/ TAIPEI Co.]: 1 ♀, Wulai, 23. IX. 1987 (Y. F. Hsu); 1 ♂, 1 ♀, same locality, 8. XI. 1987 (Y. F. Hsu); 1 ♂, same locality, emgd. 28. XII. 1987 (Y. F. Hsu); 1 ♂, same locality, 7. XI. 2000, reared from *Setaria palmifolia*, emgd. 4. XII. 2000, HSU 00L2 (Y. F. Hsu); 1 ♂, Wulai, ca 200m, 19. X. 2009 (Y. F. Hsu); 3 ♀, Chenggong/ Wulai, 21. XI. 1987 (Y. F. Hsu); 1 ♂, 1 ♀, Chenggong, 25. XI. 1987 (Y. F. Hsu). TAIPEI CITY: 1 ♂, NTU, 12. IX. 1987 (Y. F. Hsu); 1 ♀, same locality, 23. IX. 1987 (Y. F. Hsu); 1 ♂, Beitou, Junjian Yan, 5. V. 2003, reared from *Setaria*

palmifolia, emgd. 23. V. 2003 (H. S. Que); 1 ♂ , Wenshan, Xianjiyan, 27. VIII. 2012, reared from Pennisetum purpureum, emgd. 11. IX. 2012, HSU 12H51 (Y. F Hsu). TAOYUAN CITY [= TAOYUAN Co.]: 1 ♀ , Fuxing, Ronghua/Gaoyi, 1. IX. 1987 (Y. F Hsu); 1 ♂ , Longtan, 18. IX. 1999, reared from Pennisetum purpureum, emgd. 20. XI. 1999, HSU 99J55 (Y. F. Hsu); 1 ♂ , Same locality, 7. IV. 2002 (Y. F. Hsu); 1 ♀ , Fuxing, Xikoutai Bridge 2, 25. VIII. 2003, HSU 03H12 (L. W. Wu). TAIZHONG CITY [= TAICHUNG CITY/ TAICHUNG Co.]: 1 ♀ , Shishanxi, 5. IX. 1996 (C. Y. Hung). CHIAYI Co.: 2 ♂ , Fanlu, Chukou, 350m, 10. X. 2005 (Y. F. Hsu); 1 ♀ , same locality, 30. VIII. 2008 (Y. F. Hsu); 1 ♂ , Alishan, Shanmei, 30. III. 2008 (Y. F. Hsu). " TAINAN City"[TAINAN Co.]: 1 ♀ , Guantian, Wushantou, 150m, 22. I. 2007, reared from Pennisetum purpureum, emgd. 16. III. 2007, 07A32 (Y. F. Hsu). KAOHSIUNG CITY [= KAOHSIUNG Co.]: 1 ♀ , Liugui, 300m, 22. I. 2008 (Y. F. Hsu); 1 ♂ , Tianliao, 100m, 27. IV. 2010 (Y. F. Hsu). PINGDONG [= PINGTUNG] Co.: 1 ♀ , Hengchun, Kending, 17. VII. 1987 (Y. F. Hsu); 1 ♂ , Jiudawu, 1000m, 14/16. II. 2000, emgd. 23. III. 2000 (Y. T. Lo). YILAN Co.: 1 ♀ , Toucheng, Guishan Is., 4/5. III. 2006 (H. C. Huang& C. L. Huang). HUALIAN [= HUALIEN] Co.: 1 ♀ , Fengbin, Changhongqiao, 7. XI. 1995, reared from Panicum repens, emgd. 23. XI. 1995, HSU 95L5 (Y. F. Hsu); 1 ♂ , 1 ♀ , same locality, 21. X. 1996 (Y. F. Hsu). TAIDONG [= TAITUNG] Co.: 1 ♀ , Taoyuan, 15. V. 1988 (Y. F. Hsu). NANTOU Co.: 1 ♂ , Lugu, Fonghuanggu Bird and Ecology Park, 23. XI. 1996, reared from Setaria palmifolia, emgd. 19. XII. 1996, HSU 96L26 (Y. F. Hsu); 1 ♂ , same locality, 29. XII. 1996, reared from Setaria palmifolia, emgd. 2. II. 1997, HSU 96M30 (C. Y. Hung); 1 ♂ , Lugu, Xitou, Yushuikeng, 3. VI. 1997, reared from Setaria palmifolia, emgd. 21. VI. 1997, HSU 97F12 (C. C. Lu); 1 ♀ , Renai, Nanshanxi, 900m, 23. I. 2008 (Y. F. Hsu); 1 ♂ , Ren' ai, Huisun, 30. XI. 1996, reared from Setaria palmifolia, emgd. 6. I. 1997, HSU 96L48 (Y. F. Hsu).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present ay tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing

upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Genus *Thoressa* Swinhoe, [1913]

Type species: *Pamphila masoni* Moore, [1879]

Diagnostic characters include the followings: 1) Wings brown, with two white or creamy

white spots in cell M3 and CuA1 of forewing; 2) male with sexual brand present on forewing upperside; 3) uncus deeply divided, with well-developed gnathos; 4) valvae asymmetrical.

More than 20 species are known, distributed in Oriental and eastern Palearctic regions.

One species occurs in Taiwan.

***Thoressa horishana* (Matsumura, 1910) (台灣脈弄蝶/黃條褐弄蝶/黃條陀弄蝶)**

Halpe horishana Matsumura, 1910; Ent. Zs. 23 (41) (41): 181; TL: Formosa (Horisha)

Halpe sumbacula ara Fruhstorfer, 1911; Dt. ent. Z. Iris 25 (4): 47; TL: Formosa

Ssp. *takeuchii* (Matsumura, 1929)

Ampittia takeuchii Matsumura, 1929: Insecta Matsumurana 3: 107.

specimens examined:

XINZHU [= HSINCHU] Co.: 1 ♂, Guanwu, 2/3. VII. 1996 (S. C. Chen). TAIZHONG CITY [= TAICHUNG CITY/ TAICHUNG Co.]: 2 ♂, Heping, Dasyueshan Sacred Tree, 2500m, 1. VII. 1992 (C. L. Li). NANTOU Co.: 2 ♀, Ren' ai, Tianchi, 2700m, 3. VII. 2007 (L. H. Wang); 1 ♂, 1 ♀, Ren' ai, Songchuangang, ca 2500m, 29. VI. 2006 (L. H. Wang); 1 ♀, Wuling, 30. VI. 1989 (Y. F. Hsu). YILAN Co.: 1 ♀, Nan' ao, Tongshan, 1800m, 10. VI. 1999 (Y. F. Hsu). HUALIAN [= HUALIEN] Co.: 2 ♀, Guangbeibabiao, 2200m, 5. VII. 2007 (L. H. Wang); 1 ♀, Bilu, 3. VII. 1989 (Y. F. Hsu); 1 ♂, Ci' en, ca 2000m, 28. VI. 2006 (L. H. Wang).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記

Genus *Udaspes* Moore, [1881]

Type species: *Papilio folus* Cramer, [1775]

Diagnostic characters include the followings: 1) Wings dark brown, with prominent hyaline white spots on forewing and hindwing; 2) hindwing cell shorter than 1/2 of wing length; 3) antenna shorter than 1/2 of forewing costa.

2 species are known, distributed in Oriental region.

One species occur in Taiwan.

***Udaspes folus* (Cramer, [1775]) (薑弄蝶/大白紋弄蝶)**

Papilio folus Cramer, [1775]; Uitl. Kapellen 1 (1-7): 118, pl. 74, f. F; TL: "Surinam"

Hesperia cicero Fabricius, 1793; Ent. Syst. 3 (1): 338, n. 284; TL: Indian Region

Specimens examined:

TAIPEI CITY: 1 ♀, Wenshan, Gongguan Campus, NTNU, 10. XI. 2000. KAOHSIUNG CITY [= KAOHSIUNG Co.]: 1 ♂, Tianliao, 50m, 21. II. 2009 (Y. F Hsu). PINGDONG [= PINGTUNG] Co.: 1 ♀, Neipu, 9. XI. 2003, reared from *Alpinia* sp., emgd. 8. III. 2004, HSU 03L19 (Y. F. Hsu& S. C. Chen); 1 ♂, Sandimen, ca 300m, 20. II. 2009 (Y. F. Hsu). YILAN Co.: 1 ♀, Toucheng, Guishan Is., 10. IV. 2004 (Y. F. Hsu). TAIDONG [= TAITUNG] Co.: 1 ♀, Ludao, 4. V. 2009, reared from *Alpinia* sp., emgd. 30. V. 2008, HSU 08E2 (C. K. Wang); 1 ♂, 1 ♀, same locality, 9. IX. 2009, reared from *Alpinia speciosa* [= *Alpinia zerumbet*], emgd. 3. X. 2009, HSU 09J15 (C. L. Huang& Y. C. Lin); 1 ♀, same locality, 9. IX. 2009, reared from *Alpinia* sp., emgd. 6. X. 2009, HSU 09J15 (Y. F. Hsu). LIANJIANG [= LIENCHIANG] Co.: 1 ♂, Mazu, V. 2003 (Y. A. Lin).

Description.

Adult – Forewing length 17 – 24 mm. Male (Figs. XX – XX; XX – XX; XX – XX): Head hairy, brown tinged with green. Antennae with apiculus prominent, hooked, brown mixed with creamy white scalings ventrad. Proboscis dark brown. Labial palpus porrect, 1st and 2nd segments hairy, creamy white with narrow brown stripe laterally; 3rd segment minute, rod-like, smooth and brown. Thorax covered by brown tinged with green hairs. Abdomen brown dorsally, creamy white ventrally. Legs creamy white. Forewing triangular, somewhat elongate, apex pointed, margins straight. Hindwing ovate, lobed at tornus. Wing uppersides bearing pale brown hairs proximally, with surface of brown but a dark patch present proximally on forewing. Wing undersides ground color pale brown; a dark patch present at tornus of hindwing. A narrow, white, discal line on hindwing. Fringe brown. A grayish brown, slightly curved, narrow linear sexual brand on forewing upperside. Female: Body and wing patterns similar to those of male, but creamy white, semi-transparent spot in cell M3 and CuA1 of forewing, and forewing upperside without dark area; no sexual brand.

Male genitalia (Figs. XXX – XXX) – Tegumen narrowed caudad, with uncus bifid. Gathos broad, slightly serrate along posterior margin. Saccus short. Valva elongate; harpe produced into a broad, triangular piece, with a prominent dorsal beak-like spine; ampulla lobe-like, with caudal end rounded or truncated. Phallus short, stout, with phallobase slightly longer than aedeagus. Juxta as a narrow, V-shaped sclerite.

雄交尾器 (Figs. XXX – XXX) –

Female genitalia (Figs. XXX – XXX) – Corpus bursae oval. Ductus bursae membranous. Signum as a wrinkled wall with a patch of minute spines. Sterigma forming a sclerotized, wrinkled dome. Anal papillae setose. Posterior apophyses elongate, straight.

雌交尾器 (Figs. XXX – XXX) –

Global distribution.

Pakistan, India, Sri Lanka, Himalayas, Indo China, Southeast Asia, New Guinea, North Australia, New Hebrides, Fiji. Japan (Yaeyamas, Okinawa), South China, Taiwan. (Tsukiyama et al., 1997).

世界分布

Distribution in Taiwan.

Lowland Taiwan, including associated islands (Hsu, 2013).

臺灣分布

分佈於低地至中海拔。

Larval Host plant(s).

Fabaceae: *Pongamia pinnata*. (Hsu, 2013).

寄主植物

Biology.

This species is known to be multivoltine in occurrence (Hsu, 1999).

生物學

本種是一年多代物種。

Remarks.

This species was restricted to coastal areas and mostly found in southern Taiwan (Shirozu, 1960), but after the hostplant became a popular garden plant, it is now commonly found in many disturbed areas, including urban habitats (Hsu, 2013).

後記





小紋颯弄蝶



小黃星弄蝶



小稻弄蝶



巨褐弄蝶



玉帶弄蝶



白弄蝶



白斑弄蝶



白裙弄蝶



禾弄蝶



尖翅星弄蝶



尖翅褐弄蝶



竹橙斑弄蝶



奇萊孔弄蝶



弧弄蝶



昏列弄蝶



花弄蝶



長紋孔弄蝶



紅眼弄蝶



淡黃斑弄蝶



袖弄蝶



連紋袖弄蝶



菩提赭弄蝶



黃星弄蝶



黃紋孔弄蝶



黃斑弄蝶



黃點弄蝶



黃襟弄蝶



黑星弄蝶



黑澤星弄蝶



碎紋孔弄蝶



萬大弧弄蝶



臺灣流星弄蝶



臺灣脈弄蝶



臺灣窗弄蝶



臺灣楮弄蝶



墨子黃斑弄蝶



寬邊橙斑弄蝶



熱帶白裙弄蝶



熱帶橙斑弄蝶



稻弄蝶



蓬萊黃斑弄蝶



褐弄蝶



橙翅傘弄蝶



薑弄蝶



雙帶弄蝶



鐵色絨弄蝶



變紋黯弄蝶