

Species of moth (Lepidoptera) new to Hong Kong, recorded during September and October 2010: Part 2, Pyraloidea

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ABSTRACT

Eleven species of Pyraloidea moths (Lepidoptera) are reported from Hong Kong for the first time following recording in September and October 2010; they are *Scirpophaga lineata* (Butler, 1879), *Glyphodes pulverulentalis* (Hampson, 1896), *Pleuroptya plagiatalis* (Walker, 1859), *Pleuroptya punctimarginalis* (Hampson, 1896), *Paranacoleia lophophoralis* (Hampson, 1912), *Sufetula sunidesalis* Walker, 1859, *Tetridia caletoralis* Walker, 1859, *Yezobotys dissimilis* Yamanaka, 1958, *Orthaga olivacea* (Warren, 1891), *Termioptycha distantia* Inoue, 1982 and *Emmalocera miserabilis* (Strand, 1919). A further six species of Pyraloidea previously recorded but not identified are formally identified. The total number of Pyraloidea known from Hong Kong now stands at 404 species, almost 18% of the total known moth fauna in Hong Kong.

Keywords

Hong Kong, Lepidoptera, new records, Pyraloidea, Crambidae, Pyralidae

INTRODUCTION

This is the second of a series of papers resulting primarily from a six week visit in September and October 2010 to the Hong Kong Special Administrative Region, China (hereafter Hong Kong) by the first author as part of his sabbatical leave from his law firm Allen & Overy LLP. This paper notes 17 species of moth, recorded during this visit, from the families Crambidae and Pyralidae. The species had either not been previously recorded from Hong Kong, or were not confirmed as recorded from Hong Kong, pending identification, on the "Hong Kong Moth Recorder" (HKMR) database maintained by the second author for Lepidoptera in Hong Kong. As with the species recorded in our previous paper (Sterling & Kendrick, 2011), these are all species which have been determined to a specific level with a good level of certainty by external examination (without examination of the genitalia).

METHODS

Field recording took place using mercury vapour (MV) light traps at a number of sites in September and October 2010 (as per Sterling & Kendrick, 2011).

Identifications were made by comparison with the available literature, as cited under each species entry. The list order is based upon Kendrick (2002). Voucher specimens of each of the species referred to in this paper were retained by MJS and are currently in his collection in St Albans, for eventual deposition in either The Natural History Museum (BMNH), London, or the insect collection at Kadoorie Farm and Botanic Garden (KFBG), Hong Kong, unless otherwise stated.

RESULTS

There are 17 species from five subfamilies of Crambidae and Pyralidae reported herein. Eleven species are documented for the first time as recorded in Hong Kong. The remaining six species were previously documented in Kendrick (2002) from Hong Kong, but unidentified.

393 species from the families Crambidae and Pyralidae have previously been recorded from Hong Kong on HKMR. The addition here of the 11 species newly recorded in Hong Kong brings the current total to 404 species. These are therefore two of the most strongly represented moth families in the Hong Kong SAR, and comprise almost 18 percent of the total known moth fauna in Hong Kong.

Where used, the colour scale bar in the figures of set specimens is one inch (25.4mm) in length (one-sixth of an inch per colour), the black & white component is in mm, 25mm total length.

Crambidae, Schoenobiinae

Scirpophaga lineata (Butler, 1879)
(Figure 1).

Sha Lo Tung, 5 May 2006. This species is primarily known from Japan (where the larvae have been recorded feeding on rice, *Oryza sativa*) and China, as well as India (Assam), Malaysia (Selangor) and Indonesia (Sulawesi) (Lewvanich, 1981; Inoue *et al.*, 1982; Chen, Song and Wu, 2006). This species is similar to other *Scirpophaga* species recorded in Hong Kong; *S. magnella*, *S. incertulas*, *S. praelata* and *S. nivella* (Kendrick, 2002), but can be separated by the presence on the white forewing in both sexes of an oblique, slightly sinuous stripe from the mid-point of the dorsum to the apex, a small black medial stigma and fine black spots at the termen, one spot at each vein end.

Crambidae, Spilomelinae

Glyphodes stolalis (Guenee, 1854)

(Figure 2)

Ping Long, 31 December 2001; Kadoorie Institute, Shek Kong (KISK), 2 on 22 September 2010. This is part of a species complex which is recorded from India, Sri Lanka, Nepal, Burma, Thailand, China (Yunnan, Taiwan), Japan, W. Malaysia, Sumatra, Java, Borneo, Philippines, Sulawesi, New Guinea, Australia and the Solomon Islands (Inoue *et al.*, 1982; Wang, 1983; Robinson *et al.*, 1994; Yamanaka, 1995; Wang & Speidel, 2000). It is still a rare species in Hong Kong, listed but not illustrated in Kendrick (2002), and only recently confirmed to be *G. stolalis*. The first record appears to be from Tai Lung Farm (AFCD collection, Tai Lung Farm) from 20 August 1992, and there are further confirmed records from Tai Po Kau (10 October 1997), Pak Tam Chung (21 October 1999) and KFBG (15 June 2002).

Glyphodes pulverulentalis (Hampson, 1896)

(Figure 3)

KISK, 29 April 2001, 1 July 2002; Sha Lo Tung, 20 May 2006; Clearwater Bay, 24 May 2007; KFBG, 31 May 2008. This species is also recorded from China (listed as *D. strialis* in Wang (1983)), Japan and Australia (Inoue *et al.*, 1982; Wang, 1983; CSIRO Ecosystem Sciences, 1994-2011). It is known in Australia as the Mulberry Leaf Webber (CSIRO Ecosystem Sciences, 1994-2011).

Uresiphita quinquigera (Moore, 1888)

(Figure 4)

KISK, 3 July 1999, 1 August 2004, 17 October 2010; Lam Tsuen San Tsuen, 23 & 26 November 2005; Wong Chuk Yeung, Sai Kung, 9 April 2010; Shan Liu, Sai Kung, 17 September 2010. This species is also recorded from Japan, India and China, including Taiwan (Wang & Speidel, 2000) and was previously listed for Hong Kong in Kendrick (2002) as *Syllpeta* sp. B. The generic combination in Wang & Speidel (2000) is *Mecyna quinquigera*.

Pleuroptya plagiatalis (Walker, 1859)

(Figures 5 & 5a)

Wong Chuk Yeung, Sai Kung, 9 April 2010, 17 September 2010; Ng Tung Chai, 14 September 2010. This species is also recorded from Japan (Inoue *et al.*, 1982). This is a smaller, duller and less well marked species than *Pleuroptya iopasalis* (Walker, 1859), which is a common and widespread species Hong Kong.

Pleuroptya punctimarginalis (Hampson, 1896)

(Figure 6)

KISK, 7 May 2003; Sai Kung, 12 September 2005. This species is also recorded from Japan (Honshu, Kyushu, Okinawa), India and Malaysia (Inoue *et al.*, 1982) and was recently found in Taiwan (Yen Shen-horn, pers. comm.).

Pleuroptya punctimarginalis is like a smaller version of *Syllepte balteata*, but with a more diffuse terminal band and broader forewing costal boundary.

Paranacoleia lophophoralis (Hampson, 1912)

(Figure 7)

KISK, 4 August 2004, 10 September 2010 and 8 October 2010; Sha Lo Tung, 5 May 2006; Ng Tung Chai, 9 & 18 September 2010. *Paranacoleia lophophoralis* is known from Nepal, China (Anhui, Fujian, Jiangxi, Hainan, Sichuan, Taiwan, Tibet), Japan, Korea, Singapore and Kalimantan (Yamanaka, 1995; Wang & Speidel, 2000; Sutrisno, 2005; Du & Li, 2008). This species is similar to the recently described *Paranacoleia elegantula* Du & Li, 2008, described from Guangxi and Hong Kong (KISK, 13 April 2007; Nam Chung, 18 April 2007). The discal mark in *elegantula* is a proper discal spot whereas the discal mark of *lophophoralis* is a lunule.

Sufetula sunidesalis Walker, 1859

(Figure 8)

Ping Long, 27 October 2002; Lam Tsuen San Tsuen, 3 December 2005. Robinson *et al.* (1994) describe *sunidesalis* as having a 20 mm wingspan (the Hong Kong species is around 12 mm wingspan) and observe that other species which may be found in South East Asia are smaller. Inoue *et al.* (1982) illustrate a small species which is superficially very similar to the Hong Kong specimen illustrated here as *sunidesalis*. This species is therefore provisionally recorded as *sunidesalis*. According to Robinson *et al.* (1994), *sunidesalis* is known from India, Sri Lanka, Burma, Thailand, Singapore, Sarawak and the Philippines.

Crambidae, Pyraustinae

Udonomeiga vicinalis (South, 1901)

(Figure 9)

KISK, 11 August 2001; Fung Yuen, 16 October 2009; Sha Lo Tung, 14 October 2010. This species is also known from China (including Taiwan), Japan (Inoue *et al.*, 1982). This species was previously listed for Hong Kong in Kendrick (2002) as *Pleuroptya* sp. 1.

Paliga ochrealis (Wileman, 1911)

(Figure 10)

Tai Mong Tsai, 4 April 1998, 29 April 2004 (colln. AFCD, Cheung Sha Wan); KFBG, 3 June 2003, 30 April 2011; KISK 18 October 2003; Sha Lo Tung, 19 April 2007; Tai Mo Shan, 23 September 2009; Shan Liu, Sai Kung, 20 April 2010. This species is known from Japan (Inoue *et al.*, 1982) and Korea (Bae, 2001). This species was previously listed for Hong Kong in Kendrick (2002) as *Paratalanta* sp. nr. *aureolalis*.

Tetridia caletoralis Walker, 1859

(Figure 11)

The Peak, 3 November 2001. This species is also recorded from India, Nepal, S. China, Taiwan, New Guinea, and Australia (Wang & Speidel, 2000). It is similar to *Syllepte pernitescens*, though has a lighter build, a more orange-brown ground colour and the fasciae are less distinct.

Yezobotys dissimilis Yamanaka, 1958

(Figure 12)

Tai Mo Shan, 8 April 2006; Wong Chuk Yeung, Sai Kung, 2 on 9 April 2010. This species is known from Japan (Hokkaido, Honshu, Shikoku) (Inoue *et al.*, 1982). It is quite similar to *Crypsitya coclesalis*, but with a more elongate, yellower forewing and the medial fascia zig-zagging its way across each vein.

Pyralidae, Epipaschinae*Orthaga olivacea* (Warren, 1891)

(Figures 13 & 13a)

Tai Po Kau Headland 6 May 2006; KFBG (Kwun Yam Shan), 2 September 2010; Ng Tung Chai, 5, 14 & 18 September 2010; Nam Chung, 7 September 2011. This species is known from China (Henan, Zhejiang, Anhwei, Fujian, Jiangxi, Hubei, Sichuan, Yunnan, Gansu & Taiwan), Japan and Russia (Wang & Speidel, 2000; Li *et al.*, 2009). Could be confused with *Salma camphorella*, but has rounder forewing apex, lacks the forewing costal scent patch ventrally and has a dark grey rather than pale brown hindwing.

Termioptycha distantia Inoue, 1982

(Figure 14)

KISK, 10 September 2010; Ng Tung Chai, 18 September 2010. This species is known from Japan (Inoue *et al.*, 1982). Several other similar species occur in Hong Kong, *Teliphasa albifusa* is substantially bigger, and has a white medial zone to the forewing, whilst *Orthaga achatina* is also slightly larger, has a proportionately narrower forewing and appears slightly more orange brown in the ground colour.

Pyralidae, Phycitinae*Emmalocera miserabilis* (Strand, 1919)

(Figure 15)

Sha Lo Tung, 14 October 2010; fairly common at MV light. This species is known from Taiwan (Wang & Speidel, 2000).

Nephoterix intercisella Wileman, 1911

(Figure 16)

KISK, 8 April 2001, 29 September 2001, 22 September 2010; Sha Lo Tung, 14 October 2010. This species has

similar markings to the slightly larger *Calguia hapalanthes* (Meyrick, 1932) but the antennae of *intercisella* are simple, whereas the antennae of *hapalanthes* have a knot horn. *Nephoterix intercisella* is known from Japan (Honshu, Shikoku, Kyushu, Tsushima) (Inoue *et al.*, 1982), though may be overlooked in China due to its similarity to *Calguia hapalanthes*. This species was previously listed for Hong Kong in Kendrick (2002) as Phycitinae sp. M.

Euzophera batangensis Caradja, 1939

(Figure 17)

Ping Long, 16 June 2002, 26 January 2003, 2 March 2003; KISK, 18 March 2001, 13 April 2001, 3 March 2002. This species, which is known as the Persimmon Bark Borer and is a pest on Jujube trees in Northern China, is known from Japan, Korea and China (Inoue *et al.*, 1982; Choi *et al.*, 1998; Kalinova *et al.*, 2006). This species was previously listed for Hong Kong in Kendrick (2002) as Phycitinae sp. B. The HKMR database currently has 21 records of this species in Hong Kong, though only from KISK, KFBG and Lam Tsuen Valley. Apart from the single June record, all the other records have been during the dry season, from mid-November through mid-April.

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REFERENCES

- Bae, Y.S., 2001. *Insecta Koreana* Suppl. 16, Lepidoptera (Pyraloidea : Pyraustinae & Pyralinae). National Institute of Agricultural Science and Technology, Gyeonggi-do, Korea. 251 pp.
- Chen, F.Q., Song, S.M. & Wu, C.S., 2006. A review of the genus *Scirpophaga* Treitschke 1832 in China (Lepidoptera: Pyralidae). *Zootaxa* 1236: 1-22.
- Choi, H.Y., Park, M.K. & Bae, Y.S., 1998. Taxonomic notes on nine species of the tribe Phycitini (Lepidoptera, Pyralidae, Phycitinae) from Korea (I). *Insecta Koreana* 15: 23-39.
- CSIRO Ecosystem Sciences, 1994-2011: Australian Moths Online. Internet resource available from <http://www1.ala.org.au/gallery2/main.php>, accessed 10 September 2011.
- Du, H.Y. & Li, H.H., 2008. A taxonomic study on *Paranacoleia* (Lepidoptera: Crambidae: Spilomelinae) from China. *Oriental Insects* 42: 305-316.

Inoue, H., Sugi, S., Kuroko, H., Moriuti, S. & Kawabe, A., 1982. *Moths of Japan*. 2 vols. Kodansha, Tokyo. 552 pp.

Kalinová, B., Jiros, P., Zdárek, J., Wen, X.J. & Hoskovec, M., 2006. GCxGC/TOF MS technique-A new tool in identification of insect pheromones: Analysis of the persimmon bark borer sex pheromone gland. *Talanta* 69(3): 542-547.

Kendrick, R.C., 2002. *Moths (Insecta: Lepidoptera) of Hong Kong*. Ph.D. Dissertation. The University of Hong Kong, xvi + 660 pp. (Hong Kong University Theses Online: <http://library.hku.hk/record=b3027883>).

Lewvanich, A., 1981. A revision of the Old World species of *Scirpophaga* (Lepidoptera: Pyralidae). *Bulletin of the British Museum (Natural History)* (Entomology series) 42 (4): 185-298.

Li, H.H., Ren, Y.D., Zhang, D.D., Du, X.C., Li, W.C. & You, P., 2009. *Insect Fauna of Henan. Lepidoptera: Pyraloidea*. Science Press, Beijing. ix + 440 pp.

Ratnasingham, S. & Hebert, P. D. N. (2007). BOLD : The Barcode of Life Data System (www.barcodinglife.org). *Molecular Ecology Notes* 7: 355–364. DOI: 10.1111/j.1471-8286.2006.01678.x [Bold Systems Taxonomy Browser. Internet resource, accessed 1 September 2011, URL: http://www.boldsystems.org/views/taxbrowser_root.php].

Robinson, G.S., Tuck, K.R. & Shaffer, M., 1994. *A Field Guide to the Smaller Moths of South-East Asia*. The Natural History Museum, London & Malaysian Nature Society, Kuala Lumpur. 309 pp.

Sterling, M.J. & Kendrick, R.C., 2011. Species of moth new to Hong Kong, recorded during September and October 2010. *Insect News Hong Kong Entomological Society Newsletter* 2: 2-8.

Sutrisno, H., 2005. Moth Diversity at Sebang Peat Swamp and Busang River Secondary Rain Forest, Central Kalimantan. *Hayati* 12 (3): 121-126.

Wang, H.Y. & Speidel, W., 2000. *Guidebook to the Insects of Taiwan, Vol. 19, Pyraloidea (Pyralidae, Crambidae)*. Shu Shin Books, Taipei. xii + 295 pp.

Wang, P.Y., 1983. Pyralidae. pp. 56-89 in Wang, P.Y., Wang, L.Y., Fang, C.L., Bai, J.W., Zhu, H.F., Liu, Y.Q., Liu, X.Q., Chen, Y.X., Shen, G.P., Zhang, B.L., Zhao, Z.L., Hou, T.Q. & Cai, R.Q.. *Iconographia Heterocerorum Sinicorum; part I*. Science Press, Beijing. iv+156 pp., 38 plates.

Yamanaka, H., 1995. Pyralidae of Nepal (I). In Haruta, T. (ed.). *Moths of Nepal, part 4. Tinea* 14 (suppl. 2): 182-193.

FIGURES



Figure 1. *Scirpophaga lineata* (Butler, 1879)



Figure 2. *Glyphodes stolalis* (Guenee, 1854)



Figure 3. *Glyphodes pulverulentalis* (Hampson, 1896)



Figure 4. *Uresiphita quinquigera* (Moore, 1888)



Figure 5. *Pleuroptya plagiatalis* (Walker, 1859)



Figure 5a. *Pleuroptya plagiatalis* (Walker, 1859)



Figure 6. *Pleuroptya punctimarginalis* (Hampson, 1896)



Figure 7. *Paranacoleia lophophoralis* (Hampson, 1912)



Figure 8. *Sufetula sunidesalis* Walker, 1859



Figure 11. *Tetricia caletoralis* Walker, 1859



Figure 9. *Udonomeiga vicinalis* (South, 1901)



Figure 12. *Yezobotys dissimilis* Yamanaka, 1958



Figure 10. *Paliga ochrealis* (Wileman, 1911)



Figure 13. *Orthaga olivacea* (Warren, 1891)



Figure 13a. *Orthaga olivacea* (Warren, 1891)



Figure 16. *Nephopterix intercisella* Wileman, 1911



Figure 14. *Termioptycha distantia* Inoue, 1982



Figure 17. *Euzophera batangensis* Caradja, 1939



Figure 15. *Emmalocera miserabilis* (Strand, 1919)