# Fung Yuen SSSI & Butterfly Reserve

# Moth Survey 2009


## Fauna Conservation Department

## Kadoorie Farm & Botanic Garden



**29 June 2010**

Kadoorie Farm and Botanic Garden Publication Series: No 6

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## *Executive Summary*

The objective of this survey was to generate a moth species list for the Butterfly Reserve and Site of Special Scientific Interest [SSSI] at Fung Yuen, Tai Po, Hong Kong. The survey came about following a request from Tai Po Environmental Association. Recording, using ultraviolet light sources and live traps in four sub-sites, took place on the evenings of 24 April and 16 October 2009.

In total, 825 moths representing 352 species were recorded.

Of the species recorded, 3 meet IUCN Red List criteria for threatened species in one of the three main categories "Critically Endangered" (one species), "Endangered" (one species) and "Vulnerable" (one species" and a further 13 species meet "Near Threatened" criteria. Twelve of the species recorded are currently only known from Hong Kong, all are within one of the four IUCN threatened or near threatened categories listed. Seven species are recorded from Hong Kong for the first time.

The moth assemblages recorded are typical of human disturbed forest, feng shui woods and orchards, with a relatively low Geometridae component, and includes a small number of species normally associated with agriculture and open habitats that were found in the SSSI site. Comparisons showed that each sub-site had a substantially different assemblage of species, thus the site as a whole should retain the mosaic of micro-habitats in order to maintain the high moth species richness observed. Furthermore, given the lack of lowland forest remaining in Hong Kong, Fung Yuen provides an opportunity to restore this habitat type through planting and management of suitable tree species, thereby benefitting the forest dependant species of moth, butterfly and other taxa.

Several groups of moths (Acentropinae and Lithosiini), which were seen in good numbers by Hong Kong standards, are indicative of low levels of stream pollution and $SO_2$ pollution respectively.

Material retained for voucher specimens to confirm their identity comprised 32 moths, representing 31 species (see Appendix 2), and are currently kept at the KFBG Insect Collection. Nine of these species (marked # ) are thought to be undescribed.

Although based upon just two surveys, it is likely that the moth species richness at Fung Yuen will prove to be one of the highest in Hong Kong, mirroring the butterfly species richness for which the site is already renowned. Given the high number of new records to Hong Kong and the number of species meeting IUCN Red List criteria for threatened and near threatened species from just two recording sessions, it is quite possible the site may be of international conservation significance for moths, based upon documented subtropical sites with internationally significant moth assemblages elsewhere in the Asia.

Fauna Conservation Department, Kadoorie Farm & Botanic Garden
29 June 2010

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Fauna Conservation Department,
Kadoorie Farm & Botanic Garden

29 June 2010

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## *Introduction*

Following a request by Dr. W.K.Yau of Tai Po Environmental Association, the Fauna Conservation Department of KFBG agreed to undertake two moth surveys at Fung Yuen SSSI, to provide a baseline documentation of the moth diversity there. The surveys took place on 24th April and 16th October 2009. The work adds to previous Lepidoptera work undertaken at the site in a conservation project summarised by Yau *et al*. (2007).

There has been no previous documented systematic moth survey work undertaken at Fung Yuen. The moth collection at KFBG holds a small number of specimens that were collected from Fung Yuen in the late 1980s and early 1990s by J.J. Young and K.H.K. Li, with rearing data from larvae in note form (Li, pers. comm.). Additionally, a few more recent casual opportunistic records of both larvae and adults have been posted on the internet, though there is still very little information as a whole on the moths at the site. Based upon these previous records, Fung Yuen appears to be the most important site in Hong Kong for the epiplemine moth *Orudiza protheclaria*, a species noted by Holloway (1998) from Borneo as uncommon (as it is in Hong Kong) "all recent material being taken in lowland alluvial forest regenerating on abandoned farmland" – a similar habitat to Fung Yuen; globally the species is recorded from the Oriental tropics to Sulawesi (Holloway, 1998).

The history of the site is documented by Tai Po Environmental Organisation (2004), it had been actively farmed for some 300 years until the 1970s and following the expansion of Tai Po in the late 1970s and 1980s became abandoned due to migration of the villagers for work elsewhere.

The site is now managed by Tai Po Environmental Association in a private-public partnership with the local village landowners and with funding provided by the Environment & Conservation Fund. Due to the multiple ownership, the site contains a mosaic of habitats, comprising orchards, abandoned agricultural land (paddy / marsh), a few streams, regenerating secondary forest, some grassland and shrubland. Small areas of the site (Koo Ka Garden within the SSSI and Phase 1 of the Butterfly Garden, see Figure 1) are actively managed to encourage butterflies through the planting of nectar rich plants and butterfly larval hostplants. The site was designated as a SSSI on the basis of its high butterfly species richness.

## *Methods*

Location: Fung Yuen SSSI & Butterfly Garden, Tai Po, N.T.

The reserve and SSSI are adjacent to Fung Yuen village, to the north-east of Tai Po in the New Territories of Hong Kong, at 22°28'02"N, 114°10'47"E.

Recording session 1: 24 April 2009: start time: 19:00; 100% cloud cover, calm, ~ 80% r.h., ~ 23°C; finish time: 01:00; 100% cloud cover, light drizzle, calm, 95% r.h, ~ 22°C. Weather conditions were ideal for the time of year.

Recording session 2: 16 October 2009: start time: 18:30; 50% cloud cover, calm, ~ 70% r.h., ~ 26°C; finish time: 01:00; 50% cloud cover, calm, 90% r.h, ~ 24°C.

On both occasions staff and volunteers of the Tai Po Environmental Association were present to assist Dr. Roger Kendrick of the Fauna Conservation Department, KFBG, with the setting up of 4 moth "traps" (see Figure 1 for locations and Table 1 for actual trap specifications) and equipment, several of whom stayed through to the end of the recording sessions.

**Figure 1.**
Moth trap locations at Fung Yuen SSSI (X) and Butterfly Reserve (Y); inset – location of Fung Yuen in Hong Kong

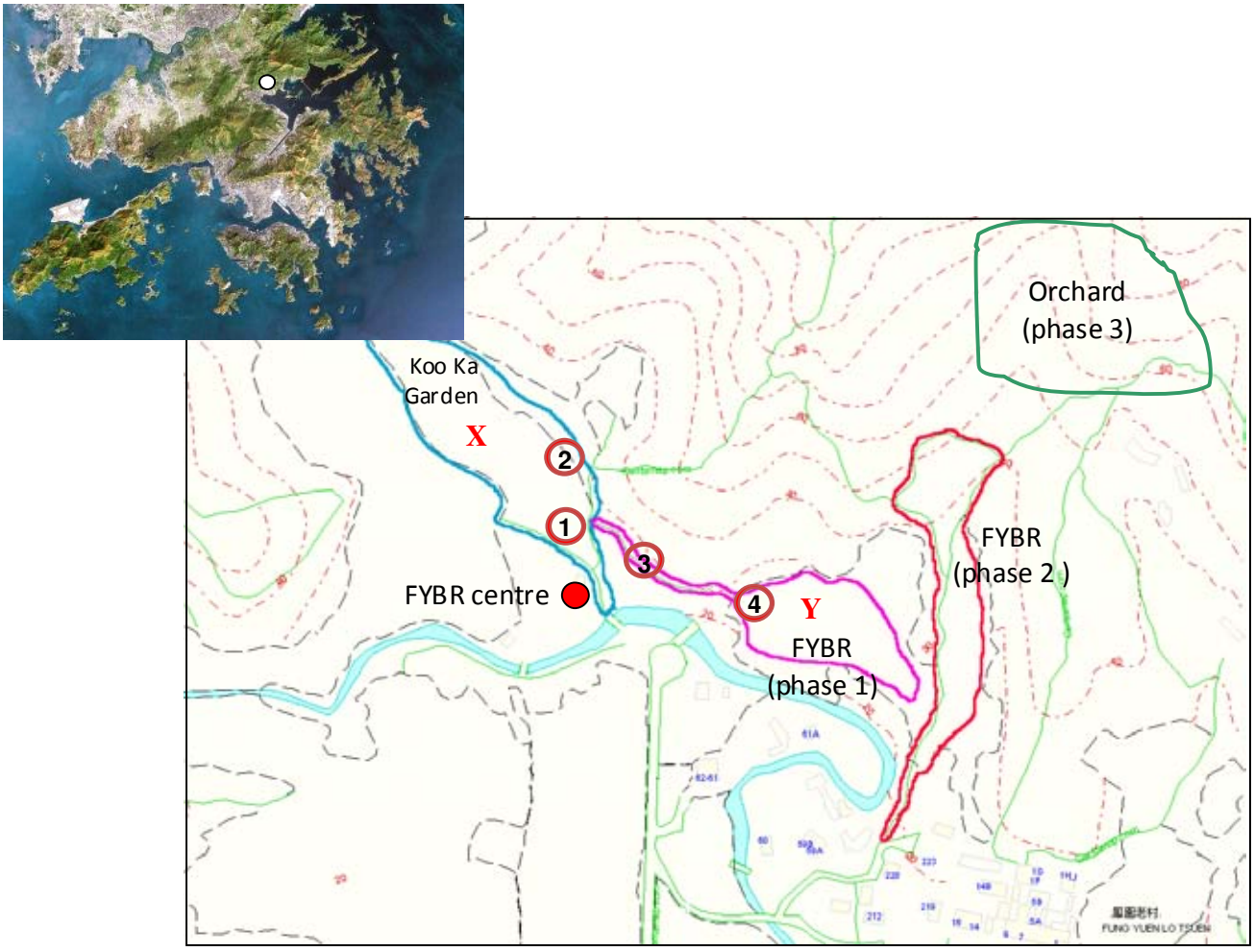

**Table 1.** Light trap specifications and operating schedule

| Trap number | Location UTM grid reference (Military UTM; WGS1984 datum) | Date | Light source(s) | Trap type | Operation hours |
|---|---|---|---|---|---|
| 1 | adjacent to FYBR "office" 50Q KK 0970 8725 | 24 Apr | 125W MBU mercury vapour [mv] | lamp set on a 2 m tall tripod with a vertical sheet | 19:00 to 01:00 |
| | | 16 Oct | same | same | 18:50 to 01:30 |
| 2 | 50 m north of Site 1 50Q KK 0970 8730 | 24 Apr | 125W MBF mv | "Robinson" design | 19:10 to 23:20 |
| | | 16 Oct | same | same | 18:15 to 00:30 |
| 3 | ~70 m south-east of Site 1, on the path to the Butterfly Reserve 50Q KK 0977 8729 | 24 Apr | 11W BLB uv blacklight + 11W BGX uv "greenlight" | "Skinner" design | 19:30 to 00:45 |
| | | 16 Oct | 125W MBF mv | "Robinson" design | 18:45 to 00:50 |
| 4 | Butterfly Reserve entrance, ~130 m east of Site 3 50Q KK 0990 8724 | 24 Apr | 125W MBF mv | "Robinson" design | 19:20 to 00:30 |
| | | 16 Oct | same | same | 18:30 to 01:15 |

Details of the Robinson and Skinner designs can be found in Fry & Waring (2001). There are many publications that investigate the trapping effectiveness and catchment radius of particular light sources (e.g. Frank 1988, Nowinszky 2004), and other factors such as moon phase and weather conditions are also known to affect the catch.

**Figure 2.** moth recording in progress at a mercury vapour light and sheet at site 1, Fung Yuen SSSI.

Moths were identified to species level wherever possible, based upon Kendrick 2002(2003). Identifications for species not included in this resource were from Holloway (2005), Kononenko & Pinratana (2005) and Holloway (2008) for Noctuidae, Clarke (1965) for Lecithoceridae, Wang & Kendrick (2009) and Wang *et al.* (2009) for Oecophoridae, Li *et al.* (2010) for *Dichomeris* (Gelechiidae) and Robinson *et al.* (1994) for other microlepidoptera. The list order for the species recorded is based upon Kristensen (1999), updated for the Noctuoidea following Lafontaine & Fibiger (2006) with the subfamilies and species of Noctuidae listed in alphabetical order. It should be noted that the higher classification of Noctuioidea is in a state of flux and a major new phylogeny for the group has just been published (Lafontaine & Schmidt, 2010), with several changes in family names and ranks for higher taxa.

Voucher specimens of species unidentified in the field were taken for identification. All material is deposited in the insect collection at Kadoorie Farm & Botanic Garden, unless noted otherwise.

Data analysis was undertaken using PRIMER 6 (Clarke & Gorley, 2006) to calculate overall species diversity, sub-site diversity and site similarity. Assessment of species against IUCN Red List criteria (IUCN, 2001) follows and adds to work undertaken by Kendrick (2007), including Chinese distributional data from moth collections at South China Agricultural University and Nankai University Insect Collection.

## *Results*

During the two surveys at the four sites in Fung Yuen, a total of 825 moths was recorded, representing 352 species. A full list of species is given in Appendix 1.

Data for each recording event at each site is presented in Table 2, below. The Fisher's alpha diversity for the site as a whole is 232.25, which is relatively high compared to other sites in Hong Kong, most sites have a Fisher's alpha diversity figure between 100 and 200. Evenness is also quite high (0.925), indicating there were few species at high abundance. The two SSSI sites were more diverse (Fisher's alpha index and Shannon index) in April than in October, whereas the two Butterfly Reserve sites were more diverse in October (Fisher's alpha), though actual species richness was greater in April except for site 3, which was operating with a different light source in April. Evenness figures for the SSSI were also lower, with agricultural and open habitat associated species being dominant. The proportion of species seen at each sub-site that were unique to each sub-site was roughly half the species at all sub-sites (Table 3). These species account for 242 of the 352 species (68%) recorded. The remaining species were distributed across the site (Table 4), including 7 species found at all sub-sites.

**Table 2.** basic diversity information for each sub-site and the overall combined site data.

| Site | | Species richness S | Number of moths N | Evenness J' | Fisher's Alpha Diversity Index α |
|---|---|---|---|---|---|
| Fung Yuen SSSI | site 1 - April | 70 | 103 | 0.949 | 96.1 |
| | site 1 - Oct | 40 | 67 | 0.879 | 41.8 |
| | site 2 - April | 80 | 123 | 0.923 | 99.2 |
| | site 2 - Oct | 52 | 80 | 0.963 | 64.4 |
| Fung Yuen Butterfly Reserve | site 3 - April | 30 | 37 | 0.965 | 73.9 |
| | site 3 - Oct | 80 | 112 | 0.948 | 125.2 |
| | site 4 - April | 123 | 214 | 0.937 | 120.4 |
| | site 4 - Oct | 70 | 89 | 0.981 | 151.4 |
| Combined data | | 352 | 825 | 0.925 | 232.2 |

**Table 3.** number of species unique to each sub-site (percentage of all species recorded at that sub-site)

| UNIQUES | | | |
|---|---|---|---|
| Site 1 | Site 2 | Site 3 | Site 4 |
| 50 (46.7%) | 54 (44.6%) | 51 (49.0%) | 87 (50.6%) |

**Table 4.** number of species shared between sub-sites

| SHARED | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Sites 1 & 2 | Sites 1 & 3 | Sites 1 & 4 | Sites 2 & 3 | Sites 2 & 4 | Sites 3 & 4 | Sites 1, 2 & 3 | Sites 1, 2 & 4 | Sites 1, 3 & 4 | Sites 2, 3 & 4 | All sites |
| 8 | 7 | 19 | 7 | 22 | 12 | 3 | 8 | 5 | 12 | 7 |

**Table 5.** Sorensen's similarity between sub-sites sites, expressed as a percentage of similarity

| | Site 1 | Site 2 | Site 3 |
|---|---|---|---|
| Site 2 | 18.77 | | |
| Site 3 | 21.32 | 22.16 | |
| Site 4 | 23.31 | 30.50 | 21.29 |

Overall, all sub-sites had a low degree of species similarity between each other (Table 5), sub-sites 2 and 4 being the most similar, at only 30.5%.

*Notable species recorded*

Twelve of the species recorded are currently considered endemic to Hong Kong; these are *Promalactis biovata, Stereodytis acutidens, Stereodytis brevignatha* (all three were described as new to science in 2009), *Bellulia galsworthyi, Belciana scorpio, Sigilliclystis kendricki, Cerynea discontenta, Ugia purpurea, Athetis hongkongensis, Luceria striata* and two undescribed species; *Apha* sp. A and Acontiinae sp. B.

It appears that at least seven of the species recorded have not been seen in Hong Kong before; they are *Hypenagonia* sp. A, *Mecodina diastriga* (subsequently recorded at KFBG the following night!), *Frisilia* sp. A, *Frisilia* sp. B, *Faristenia* sp. A, *Helcystogramma* sp. A and Nepticulidae sp. A. Identifications on the six unidentified species are in progress.

Additionally, there are 16 species, listed in Table 6 (below), which, based upon their known ecological and geographic data, meet the IUCN Red List criteria for threatened or near threatened species, almost all due to their restricted known global distribution.

**Table 6.** moth species found at Fung Yuen which meet IUCN Red List criteria for threatened / near threatened species

| Critically Endangered (CR) | Near Threatened (NT) |
|---|---|
| *Stereodytis brevignatha* Wang & Kendrick, 2009 | *Dasyses* sp. nr. *correpta*<br>*Edosa* sp. B<br>*Edosa* sp. C<br>*Promalactis biovata* Wang, Kendrick & Sterling, 2009<br>*Aeolanthes* sp. nr. *erebomicta*<br>*Psilalcis galsworthyi* Sato, 1996<br>*Sigilliclystis kendricki* Galsworthy, 1999<br>*Scopula* sp. C (undescribed)<br>*Apha* sp. A (undescribed)<br>*Bellulia galsworthyi* Fibiger, 2008<br>*Cerynea discontenta* Galsworthy, 1998<br>*Ugia purpurea* Galsworthy, 1997<br>*Athetis hongkongensis* Galsworthy, 1997 |
| Endangered (EN) | |
| *Stereodytis acutidens* Wang & Kendrick, 2009 | |
| Vulnerable (VU) | |
| *Luceria striata* Galsworthy, 1997 | |

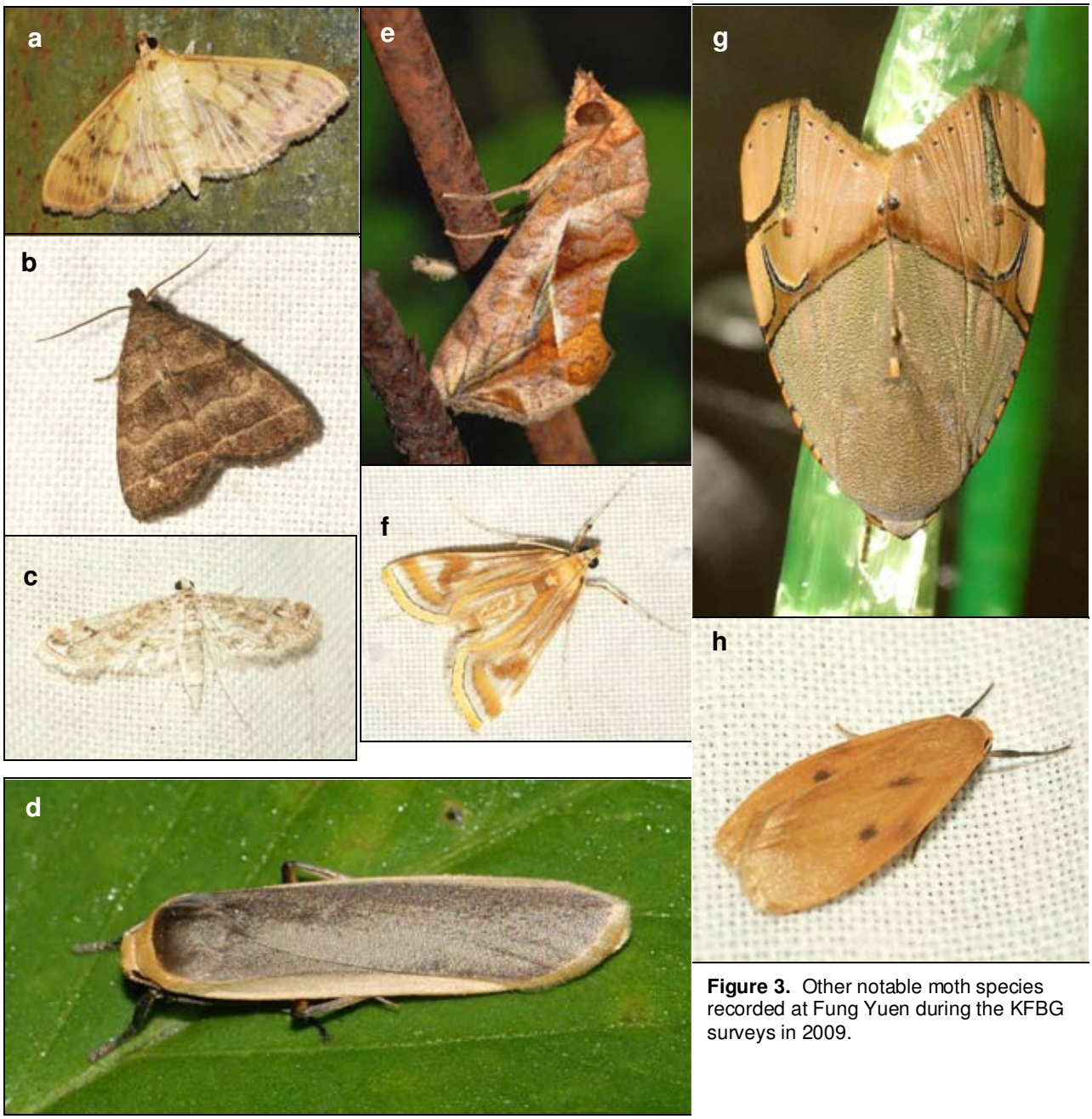


**Figure 3.** Other notable moth species recorded at Fung Yuen during the KFBG surveys in 2009.

(a) *Pleuroptya* sp A.; (b) *Herminia* sp. A; (c) *Parapoynx fluctuosalis*; (d) *Brunia antica*;
(e) *Oraesia emarginata*; (f) *Eoophyla* sp. A nr. *sinensis*; (g) *Ramadasa pavo*; (h) *Microlithosia shaowuica*

*Other records of note*

In the April survey, there were a few other significant records: three other species are recorded in HK for the second, fourth and seventh time, respectively. Other rare species include *Ramadasa pavo* (Figure 3g) and Araeopteroninae sp. 1 (possibly also undescribed).

During the October survey, other notable species were recorded, including a 5th HK record of the plume moth *Stenoptilia taprobanes*, an unidentified snout moth (*Pleuroptya* sp. A, Figure 3a) representing a likely new species for HK, the third site in HK for the unidentified fan-foot moth

*Herminia* sp. A (Figure 3b) and a 5th HK record for the leaf-twirler *Dichomeris microsphena*. Also of interest was the occurrence of the fruit-piercing noctuid moth *Oraesia emarginata* (Figure 3e), a close relative of Hong Kong's own blood-sucking (see Zaspel *et al*., 2007) moth, *Calyptra minuticornis*.

During both surveys, one further species of note was recorded, *Pseudogyrtona perversa*, indicating that a well established population of this species exists at Fung Yuen. Only single individuals had been seen in Hong Kong prior to the eight seen over the two surveys at Fung Yuen.

## *Discussion*

Considering the present study only covered two surveys, there were a high number of species new to HK and also several species which meet the IUCN Red List criteria for threatened species (IUCN, 2001), indicating that the site has a high conservation value, mirroring the high butterfly species richness found at Fung Yuen.

Based upon this initial survey and comparing with data for Kadoorie Institute and Kadoorie Farm & Botanic Garden (Kendrick, 2002(2003)), it is very likely the species richness at Fung Yuen will be in excess of 1,000 species. Data observed so far suggests the site is one of the most diverse moth sites recorded to date in Hong Kong.

Species seen were a mix of habitat specialists and generalists, most singletons recorded were not habitat associates except for forest species (Geometridae, subfamilies Geometrinae and Ennominae) at site 4 and riparian species (specifically species in the subfamily Acentropinae (Figures 3c & 3f), whose larvae are aquatic) at site 2, indicating better forest habitat at site four and the presence of a relatively unpolluted stream close to site 2.

As yet, it is not possible to draw many conclusions about species assemblages due to insufficient recording effort, but some generalist species were present. Six of the seven species found at all the sub-sites – *Hydriris ornatalis, Creatonotos transiens, Corgatha ruficeps, Ugia purpurea, Eublemma ragusana* and *Nodaria externalis* occur throughout in Hong Kong in many different habitats, the last of these is a detritivore in the larval stages. The seventh species found throughout Fung Yuen is *Parapoynx dimiutalis*, a stream associated species with aquatic larvae, which is known to wander some distance from streams. There were also some specialist or habitat associated species recorded. The presence of six species of Acentropinae (Figures 3c & 3f), which have stream dwelling larvae, indicates low pollution levels in the water (Speidel & Mey, 1999) and the presence of 14 species of Lithosiini (Arctiinae) (Figures 3d & 3h), is high by Hong Kong's standards, indicating a low level of local $SO_2$ pollution, as this group of moths have larvae that feed on lichens (e.g. Scoble, 1992), which are susceptible to $SO_2$ pollution (e.g. Hawksworth & Rose, 1976, Blett *et al.*, 2003; Fenn *et al*., 2007).

The number of IUCN threatened or near threatened species recorded per session is high compared to other sites where moth recording has taken place in Hong Kong, and is only exceeded by Kadoorie Farm & Botanic Garden. Comparable site data from other countries with a similar sub-tropical climate is not readily available, primarily due to the lack of published data, or incomplete data covering only one or a few families, usually Sphingidae (e.g. Kitching, 1996; Frontier Vietnam, 2004). Some tentative inference can be drawn from available country lists (e.g. Taiwan, Nepal, Vietnam) as to how many species are likely to be IUCN red-listed, with island and montane faunas being particularly high in endemic species, where moth assemblages will contain a significant proportion (typically two to five percent), of endemic species, e.g. around 5% of moths species at An Ma Shan in Taiwan are species endemic to Taiwan (Fu & Tzuoo, 2002, 2004).

The low Geometridae : Noctuidae (including quadrifine noctuoid taxa) ratio observed (58 geometrid species to 159 noctuid species, i.e. a ratio of 1:2.75) is indicative of high human disturbance (Kitching, *et al*. 2000), with relatively few true forest species recorded, and when compared to KFBG (231 geometrid species to 567 noctuid species, 1:2.45), there is a lower proportion of Geometridae recorded at Fung Yuen. However, there were very few open habitat species recorded, such as Noctuinae (e.g. genera *Mythimna*, *Sasunaga*, *Agrotis*) and Plusiinae, species which are common in open habitats (grassland, agriculture, abandoned agriculture) in Hong Kong, indicating the overall moth fauna composition at Fung Yuen comprises forest and orchard species rather than open habitat species, with a significant number of generalists.

If it is the aim of managing the site to maintain or increase the biodiversity of the Lepidoptera fauna at Fung Yuen, then managing the site in favour of lowland forest and orchard habitats, retaining the streams, would be likely to sustain the existing level of moth and butterfly diversity. Obtaining a more complete temporal picture of the moth community variation throughout at least a one year study period would greatly enhance the existing level of understanding about the moth diversity at Fung Yuen and how to maintain this rich diversity.

## *Conclusions*

Of the species recorded, 3 meet IUCN Red List criteria for threatened species in one of the three main categories “Critically Endangered” (one species), “Endangered” (one species) and “Vulnerable” (one species” and a further 13 species meet “Near Threatened” criteria. Twelve of the species recorded are currently only known from Hong Kong, all are within one of the four IUCN threatened or near threatened categories listed. Seven species are recorded from Hong Kong for the first time.

Several groups of moths (Acentropinae and Lithosiini), which were seen in good numbers by Hong Kong standards, are indicative of low levels of stream pollution and $SO_2$ pollution respectively.

Material retained for voucher specimens to confirm their identity comprised 32 moths, representing 31 species, and are currently kept at the KFBG Insect Collection. At least nine of these species are thought to be undescribed.

Although based upon just two surveys, it is likely that the moth species richness at Fung Yuen will prove to be one of the highest in Hong Kong, mirroring the butterfly species richness for which the site is already renowned. The number of new records to Hong Kong and the number of species meeting IUCN Red List criteria for threatened species from just two recording sessions suggests that the site is possibly of international conservation significance for moths.

The moth assemblages recorded are typical of human disturbed forest, feng shui woods and orchards, with a relatively low Geometridae component, but includes only a small number of low-conservation interest species normally associated with agriculture and open habitats that were found in the SSSI. Comparison of each sub-site showed that each sub-site had a substantially different assemblage of species, and each sub-site also had species of conservation concern,

## Recommendations

Considering several points under the conclusions, and bearing in mind that the survey work undertaken so far is temporally limited, it is recommended that the site as a whole should maintain the mosaic of forest and orchard micro-habitats in order to maintain the high moth species richness observed. Where possible, allowing full forest successional ecology to take place, perhaps with assisted tree planting of suitable native lowland forest species, would be likely to enhance the moth diversity at Fung Yuen, due to the site's close proximity to Sha Lo Tung and Plover Cove Country Park. Maintaining the ecological links to these sites is imperative to retaining Fung Yuen as a viable site for nature conservation. Effective and sustained protection of the stream catchments and courses leading into and passing through Fung Yuen is imperative for the conservation of maintaining high water quality, the associated moth species in the crambid subfamily Acentropinae and other flora and fauna dependant upon clean water.

Further recording, at least monthly for a minimum period of one year, would be recommended to give a thorough baseline of the moth diversity at Fung Yuen, sufficient to give (a) more specific site management advice likely to benefit the species of conservation interest, and (b) opportunity to train TPEA staff in moth recording for future monitoring at Fung Yuen. Investigating the ecology of the threatened species would be a priority to further aid site management.

## Acknowledgements

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## *Appendix 1* Full list of moth species recorded at Fung Yuen SSSI & Butterfly Reserve

**KEY**

**HK** – endemic to Hong Kong;
CR / EN / VU / NT – meets IUCN endangered species red list criteria Critically Endangered / Endengered / Vulnerable / Near Threatened

vr – very rare r – rare s – scarce u – uncommon
f – frequent c – common vc – very common
rd – restricted l – local w – widespread
dd – data deficient NR – new record for Hong Kong

| Species number | Family | Subfamily | *species* Species Author(s) | HK Status & Distribution | Total Count | Traps 24/4 | Traps 16/10 |
|---|---|---|---|---|---|---|---|
| 1 | Nepticulidae | Nepticulinae | Nepticulidae sp. indet. #1 | vr, rd NR | 1 | 2 | |
| 2 | Tineidae | Hapsiferinae | *Dasyses* sp. nr. *correpta* | NT s, l | 2 | 1 | |
| 3 | | Perissomasticinae | *Edosa* sp. B | NT u, l | 1 | | 4 |
| 4 | | | *Edosa* sp. C | NT u, w | 2 | | 3 |
| 5 | Psychidae | Unplaced to subfamily | Psychidae sp. indet. #1 | dd | 1 | 4 | |
| 6 | Gracillariidae | Gracillariinae | *Caloptilia* sp. nr. *protiella* | r, rd | 1 | 4 | |
| 7 | | | *Epicephala albifrons* (Stainton, 1859) | f, w | 1 | 4 | |
| 8 | | | *Epicephala* sp. A (albifrons group) | dd (r, rd) | 1 | 1 | |
| 9 | Plutellidae | Plutellinae | *Plutella xylostella* (Linnaeus, 1758) | c, w | 5 | 4 | 1 |
| 10 | Yponomeutidae | Unplaced to subfamily | Yponomeutidae genus & sp. B | dd (r, rd) | 2 | 4 | |
| 11 | Gelechiidae | Dichomeridinae | *Dichomeris microsphena* (Meyrick, 1921) | s, w | 1 | | 3 |
| 12 | | | *Dichomeris moriutii* Pomonarenko & Ueda, 2004 | u, w | 1 | | 3 |
| 13 | | | *Dichomeris orientis* Park & Hodges, 1995 | s, l | 1 | 4 | |
| 14 | | | *Helcystogramma triannulella* (Herrich-Shäffer, 1854) | s, w | 2 | | 1 |
| 15 | | | *Helcystogramma* sp. A | vr, rd NR | 1 | | 3 |
| 16 | | Chelariinae | *Anarsia patulella* (Walker, 1864) | u, l | 3 | 1,4 | |
| 17 | | | *Anarsia phortica* Meyrick, 1913 | r, rd | 1 | 4 | |
| 18 | | | *Anarsia* sp. A | dd (r, rd) | 1 | | 4 |
| 19 | | | *Anarsia* sp. nr. *isogona* Meyrick, 1913 | f, l | 2 | | 1,2 |
| 20 | | | *Faristenia* sp. 1 | vr, rd NR | 1 | | 4 |
| 21 | | | *Hypatima arignota* (Meyrick, 1916) | f, l | 1 | 4 | |
| 22 | | | *Mesophleps albilinella* (Park, 1990) | s, l | 1 | 4 | |
| 23 | | | *Mesophleps palpigera* (Walsingham, 1891) | r, rd | 1 | 2 | |
| 24 | Autostichidae | Autostichinae | *Autosticha maculosa* | c, w | 1 | | 1 |
| 25 | Lecithoceridae | Lecithocerinae | *Frisilia* sp. 1 | vr, rd NR | 1 | 4 | |
| 26 | | | *Frisilia* sp. 2 | vr, rd NR | 1 | 4 | |
| 27 | | | *Homaloxestis myloxesta* Meyrick, 1932 | c, w | 1 | 1 | |
| 28 | Oecophoridae | Oecophorinae | *Promalactis biovata* Wang, Kendrick & Sterling, 2009 | NT **HK**; f, w | 1 | 4 | |
| 29 | | | *Promalactis semantris* (Meyrick, 1906) | s, w | 2 | 3 | 3 |
| 30 | | | *Stereodytis acutidens* Wang & Kendrick, 2009 | EN **HK**; u, l | 1 | 1 | |
| 31 | | | *Stereodytis brevignatha* Wang & Kendrick, 2009 | CR **HK**; r, rd | 2 | 1 | |
| 32 | | Stathmopodinae | *Stathmopoda* sp. G | dd | 1 | | 3 |
| 33 | | | *Stathmopoda stimulata* Meyrick, 1913 | c, w | 1 | 2 | |
| 34 | Coleophoridae | Blastobasinae | *Blastobasis* sp. A | c, w | 1 | 2 | |
| 35 | Elachistidae | Aeolanthinae | *Aeolanthes* sp. nr. *erebomicta* | NT r, l | 2 | 4 | |
| 36 | Cosmopterigidae | Chrysopeleiinae | *Ascalenia* sp. nr. *thoracista* (Meyrick, 1915) | c, w | 38 | 1,2,4 | |
| 37 | | Cosmopteriginae | *Labdia oxychlora* Meyrick, 1932 | u, w | 1 | 4 | |
| 38 | | | *Labdia semicoccinea* Stainton, 1859 | dd (r, rd) | 2 | 1,4 | |
| 39 | | | Cosmopterigidae sp. indet. #1 | vr, rd | 1 | 1 | |
| 40 | Tortricidae | Tortricinae | *Adoxophyes privatana* (Walker, 1863) | c, w | 9 | 4 | |
| 41 | | | *Homona coffearia* (Neitner, 1861) | c, w | 8 | 1,4 | |
| 42 | | | *Homona eductana* (Walker, 1863) | c, w | 1 | 2 | |
| 43 | | | *Meridemis furtiva* Diakonoff, 1976 | c, w | 2 | | 2,4 |
| 44 | | Olethreutinae | *Arcesis threnodes* (Meyrick, 1905) | s, l | 3 | 1,2 | |
| 45 | | | *Bactra venosana* (Zeller, 1847) | dd (r, rd) | 2 | 2 | |
| 46 | | | *Cryptophlebia ombrodelta* (Lower, 1898) | c, w | 1 | 2 | |
| 47 | | | *Cryptophlebia repletana* (Walker, 1863) | c, w | 2 | | 2 |
| 48 | | | *Cryptophlebia* sp. A | dd (r, rd) | 1 | | 1 |

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f – frequent c – common vc – very common
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dd – data deficient NR – new record for Hong Kong

| Species number | Family | Subfamily | *species* Species Author(s) | HK Status & Distribution | Total Count | Traps 24/4 | Traps 16/10 |
|---|---|---|---|---|---|---|---|
| 49 | | | *Dudua aprobola* (Meyrick, 1886) | c, w | 2 | 1,4 | |
| 50 | | | *Gatesclarkeana idia* Diakonoff, 1973 | s, w | 3 | 1,4 | |
| 51 | | | *Lobesia aeolopa* Meyrick, 1907 | c, w | 1 | 2 | |
| 52 | | | *Lobesia* sp. B nr. *pyriformis* | dd (r, rd) | 1 | 1 | |
| 53 | | | *Loboschiza koenigiana* (Fabricius, 1775) | f, w | 1 | | 2 |
| 54 | | | *Fibuloides* sp. indet. #1 | dd | 1 | 1 | |
| 55 | | | *Ophiorrhabda cellifera* (Meyrick, 1912) | s, w | 1 | 4 | |
| 56 | | | *Ophiorrhabda mormopa* (Meyrick, 1906) | u, l | 3 | | 1,2,3 |
| 57 | | | *Rhopobota naevana* (Hübner, [1814-1817]) | dd (r, rd) | 1 | 4 | |
| 58 | | | *Rhopobota* sp. B | dd (u, l) | 1 | 4 | |
| 59 | | | *Rhopobota* sp. C | dd (u, l) | 1 | 3 | |
| 60 | | | *Sorolopha archimedias* (Meyrick, 1912) | f, w | 1 | 3 | |
| 61 | | | *Sorolopha* sp. B | r, rd | 1 | 2 | |
| 62 | | | *Statherotis discana* (Felder & Rogenhofer, 1875) | u, w | 1 | 4 | |
| 63 | Choreutidae | Choreutinae | *Choreutis fulminea* Meyrick, 1912 | s, l | 1 | | 3 |
| 64 | Zygaenidae | Chalcosiinae | *Eterusia aedea* (Clerck, 1759) | c, w | 2 | 1 | |
| 65 | Limacodidae | unplaced to subfamily | *Phlossa conjuncta* (Walker, [1855]) | f, w | 1 | 1 | |
| 66 | Cossidae | Cossinae | *Phragmataecia fusca* Wileman, 1911 | s, w | 1 | 3 | |
| 67 | Pterophoridae | Pterophorinae | *Stenoptilodes taprobanes* (Felder & Rogenhofer, 1875) | r, rd | 1 | | 1 |
| 68 | Pyralidae | Galleriinae | *Doloessa viridis* Zeller, 1848 | c, w | 2 | 1,3 | |
| 69 | | | *Tirathaba irrufatella* Ragonot, 1901 | s, l | 2 | 2,4 | |
| 70 | | Pyralinae | *Endotricha repandalis* (Fabricius, 1794) | c, w | 9 | 2 | 2,3 |
| 71 | | | *Endotricha theonalis* (Walker, 1859) | f, w | 1 | 1 | |
| 72 | | Phycitinae | Assara sp. B | vr, rd NR | 1 | | 4 |
| 73 | | | *Ectomyelois ceratoniae* (Zeller, 1839) | c, w | 2 | 1,4 | |
| 74 | | | *Emmalocera neesimella* (Ragonot, 1901) | u, w | 2 | 4 | 4 |
| 75 | | | *Etiella zinckenella* (Treitschke, 1832) | f, w | 2 | | 1,3 |
| 76 | | | *Guastica semilutea* Walker, 1863 | c, w | 2 | 3,4 | |
| 77 | | | *Indomyrlaea ferreotincta* (Hampson, 1912) | s, l | 2 | | 1 |
| 78 | | | *Morosaphycita morosalis* (Sallmüller, 1880) | u, l | 2 | 4 | 3 |
| 79 | | | *Phycita cavifrons* Meyrick, 1932 | r, rd | 1 | 2 | |
| 80 | Crambidae | Pyraustinae | *Hyalobathra opheltesalis* (Walker, 1859) | u, l | 1 | 2 | |
| 81 | | | *Isocentris filalis* (Guenée, 1854) | c, w | 1 | | 4 |
| 82 | | Acentropinae | *Agassiziella* sp. nr. *albidivisa* (Warren, 1896) | vr, rd | 1 | | 2 |
| 83 | | | *Eoophyla* sp. A nr *sinensis* | u, l | 5 | | 1,2,3 |
| 84 | | | *Eristena* sp. nr. *bifurcalis* (Pryer, 1877) | r, rd | 1 | | 2 |
| 85 | | | *Paracymoriza vagalis* (Walker, [1866]) | s, l | 1 | | 3 |
| 86 | | | *Parapoynx diminutalis* Snellen, 1880 | u, w | 32 | 2 | All |
| 87 | | | *Parapoynx fluctuosalis* (Zeller, 1852) | s, l | 3 | 2,4 | |
| 88 | | Crambinae | *Calamotropha* sp. nr. *melanosticta* (Hampson, 1895) | r, rd | 1 | 2 | |
| 89 | | | *Chilo auricilia* Dudgeon, 1905 | r, rd | 1 | | 2 |
| 90 | | | *Culladia hastiferalis* (Walker, 1865) | c, w | 7 | 1,2 | |
| 91 | | Schoenobiinae | *Scirpophaga praelata* (Scopoli, 1763) | u, l | 1 | 2 | |
| 92 | | Spilomelinae | *Aethaloessa calidalis* (Guenée, 1854) | s, l | 2 | 1 | |
| 93 | | | *Antigastra catalaunalis* (Duponchel, 1833) | r, rd | 1 | | 2 |
| 94 | | | *Camptomastix hisbonalis* (Walker, 1859) | c, w | 3 | 4 | |
| 95 | | | *Cnaphalocrocis medinalis* (Guenée, 1854) | c, w | 2 | | 3,4 |
| 96 | | | *Cnaphalocrocis poeyalis* (Boisduval, 1833) | c, w | 1 | | 4 |
| 97 | | | *Diasemiopsis ramburialis* (Duponchel, 1834) | s, rd | 1 | 2 | |
| 98 | | | *Eurrhyparodes bracteolalis* (Zeller, 1852) | s, l | 1 | | 2 |
| 99 | | | *Eurrhyparodes tricoloralis* (Zeller, 1852) | s, l | 1 | | 3 |

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| Species number | Family | Subfamily | *species* Species Author(s) | HK Status & Distribution | Total Count | Traps 24/4 | Traps 16/10 |
|---|---|---|---|---|---|---|---|
| 100 | | | *Filodes fulvidorsalis* (Hübner, 1832) | c, w | 8 | 2,4 | |
| 101 | | | *Glyphodes bicolor* (Swainson, [1821]) | c, w | 1 | | 3 |
| 102 | | | *Herpetogramma licarsisalis* (Walker, 1859) | c, w | 4 | 1,2 | 4 |
| 103 | | | *Hydriris ornatalis* (Duponchel, 1832) | c, w | 7 | 2,3 | All |
| 104 | | | *Hymenia perspectalis* (Hübner, 1796) | u, w | 1 | 2 | |
| 105 | | | *Ischnurges gratiosalis* (Walker, 1859) | f, w | 1 | | 4 |
| 106 | | | *Lamprosema tampiusalis* (Walker, 1859) | c, w | 4 | 2,4 | |
| 107 | | | *Metoeca foedalis* (Guenée, 1854) | c, w | 1 | | 3 |
| 108 | | | *Omiodes diemenalis* (Guenée, 1854) | u, w | 5 | 4 | 2,3 |
| 109 | | | *Palpita pajnii* Kirti & Rose, 1992 | s, l | 1 | | 1 |
| 110 | | | *Pleuroptya* sp. A | r, rd | 1 | | 1 |
| 111 | | | *Prophantis adusta* Inoue, 1986 | f, w | 1 | 4 | |
| 112 | | | *Psara basalis* (Walker, 1865) | u, w | 2 | | 2,3 |
| 113 | | | *Sameodes cancellalis* (Zeller, 1852) | f, w | 1 | | 2 |
| 114 | | | *Spoladea recurvalis* (Fabricius, 1775) | c, w | 9 | 2,4 | 2,3,4 |
| 115 | | | *Syllepte pernitescens* (Swinhoe, 1894) | c, w | 1 | 4 | |
| 116 | | | *Symmoracma minoralis* (Snellen, 1880) | u, l | 9 | 2,4 | 1,2,4 |
| 117 | | | *Talanga sexpunctalis* (Walker, 1874) | c, w | 1 | | 3 |
| 118 | Uraniidae | Uraniinae | *Lyssa zampa* Butler, 1869 | c, w | 1 | | 4 |
| 119 | Geometridae | Ennominae | *Ascotis selenaria* ([Denis & Schiffermüller], 1775) | c, w | 1 | 1 | |
| 120 | | | *Chiasmia emersaria* (Walker, 1861) | c, w | 1 | | 3 |
| 121 | | | *Chiasmia monticolaria* (Leech, 1897) | f, l | 1 | 4 | |
| 122 | | | *Chiasmia triangulata* (Hampson, 1891) | s, l | 1 | | 3 |
| 123 | | | *Coremecis* sp. A | s, l | 2 | 1 | |
| 124 | | | *Corymica arnearia* Walker, 1860 | f, w | 1 | 2 | |
| 125 | | | *Dasyboarmia subpilosa* (Warren, 1894) | vc, w | 4 | 1,4 | |
| 126 | | | *Ectropis bhurmitra* (Walker, 1860) | c, w | 4 | 4 | |
| 127 | | | *Fascellina chromataria* Walker, 1860 | vc, w | 3 | 4 | |
| 128 | | | *Fascellina plagiata* (Walker, 1866) | c, w | 1 | 4 | |
| 129 | | | *Hypomecis cineracea* (Moore, 1888) | f, l | 4 | 3,4 | 4 |
| 130 | | | *Hyposidra infixaria* (Walker, 1860) | vc, w | 1 | 3 | |
| 131 | | | *Hyposidra talaca* (Walker, 1860) | vc, w | 1 | 4 | |
| 132 | | | *Lomographa inamata* (Walker, 1861) | c, l | 1 | | 3 |
| 133 | | | *Luxiaria phyllosaria* (Walker, 1860) | f, w | 1 | 4 | |
| 134 | | | *Macaria abydata* Guenée, 1857 | Intr.; u, w | 1 | 2 | |
| 135 | | | *Obeidia tigrata* (Guenée, 1858) | c, w | 1 | 1 | |
| 136 | | | *Ophthalmitis herbidaria* (Guenée, 1858) | c, w | 1 | 2 | |
| 137 | | | *Ourapteryx clara* Butler, 1880 | c, w | 2 | 4 | |
| 138 | | | *Pareumelea eugeniata* (Guenée, 1857) | c, w | 1 | 3 | |
| 139 | | | *Peratophyga venetia* Swinhoe, 1902 | c, w | 1 | | 2 |
| 140 | | | *Plesiomorpha flaviceps* (Butler, 1881) | c, w | 1 | 4 | |
| 141 | | | *Plutodes costatus* (Butler, 1866) | vc, w | 7 | 1,3 | |
| 142 | | | *Pseudonadagara semicolor* (Warren, 1895) | c, w | 1 | 4 | |
| 143 | | | *Psilalcis galsworthyi* Sato, 1996 | NT vc, w | 1 | 1 | |
| 144 | | | *Rutellerona pseudocessaria* Holloway, 1993 [1994] | c, w | 3 | 4 | |
| 145 | | | *Scardamia auranticaria* Bremer, 1864 | u, l | 1 | | 3 |
| 146 | | | *Scardamia metallaria* Guenée, 1858 | u, w | 2 | | 4 |
| 147 | | | *Serratophyga xanthospilaria* (Wehrli, 1925) | c, w | 1 | 1 | |
| 148 | | | *Zanclopera falcata* Warren, 1894 | c, w | 1 | 4 | |
| 149 | | Geometrinae | *Comibaena argentataria* (Leech, 1897) | r, l | 3 | 2,4 | |
| 150 | | | *Comibaena cassidara* (Guenée, 1857 [1858]) | u, l | 1 | 4 | |

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| Species number | Family | Subfamily | *species* Species Author(s) | HK Status & Distribution | Total Count | Traps 24/4 | Traps 16/10 |
|---|---|---|---|---|---|---|---|
| 151 | | | *Hemithea marina* (Butler, 1878) | c, w | 1 | 4 | |
| 152 | | | *Hemithea tritonaria* (Walker, [1863]) | c, w | 3 | 2,4 | |
| 153 | | | *Lophophelma calaurops* (Prout, 1912) | vc, w | 1 | | 2 |
| 154 | | | *Pelagodes antiquadraria* (Inoue, 1976) | c, w | 3 | 1,4 | |
| 155 | | | *Pingasa ruginaria* (Guenée, 1857 [1858]) | c, w | 1 | | 3 |
| 156 | | | *Thalassodes immissaria* Walker, 1861 | c, w | 1 | | 3 |
| 157 | | Larentiinae | *Bosara subrobusta* (Inoue, 1988) | u, w | 3 | 2 | |
| 158 | | | *Collix ghosha* Walker, 1862 | f, rd | 1 | 1 | |
| 159 | | | *Pseudeuchlora kafebera* (Swinhoe, 1894) | c, w | 1 | | 4 |
| 160 | | | *Sigilliclystis kendricki* Galsworthy, 1999 | NT **HK**; c, w | 1 | | 1 |
| 161 | | | *Spiralisigna subpumilata* (Inoue, 1972) | f, w | 2 | 1,4 | |
| 162 | | Sterrhinae | *Idaea chotaria* Swinhoe, 1886 | r, rd | 1 | 4 | |
| 163 | | | *Idaea costiguttata* (Warren, 1896) | c, w | 3 | 2 | 3 |
| 164 | | | *Idaea impexa* (Butler, 1879) | c, w | 2 | 2,4 | |
| 165 | | | *Idaea jakima* (Butler, 1878) | f, w | 1 | | 4 |
| 166 | | | *Idaea macrospila* (Prout, 1926) | c, w | 1 | 1 | |
| 167 | | | *Idaea phaeocrossa* (Prout, 1932) | f, w | 1 | | 2 |
| 168 | | | *Idaea ptyonopoda* (Hampson, 1895) | c, w | 4 | 2,4 | |
| 169 | | | *Idaea vacillata* (Walker, 1862) | c, w | 2 | 4 | 2 |
| 170 | | | *Lophophleps triangularis* (Hampson, 1895) | c, w | 2 | 3 | 4 |
| 171 | | | *Organopoda carnearia* (Walker, 1861) | f, l | 1 | | 3 |
| 172 | | | *Perixera griseata* (Warren, 1896) | f, l | 2 | 1,4 | |
| 173 | | | *Perixera punctata* (Warren, 1897) | s, l | 1 | | 3 |
| 174 | | | *Problepsis eucircota* Prout, 1913 | r, rd | 1 | | 4 |
| 175 | | | *Scopula* sp. C (nov.) | NT c, w | 2 | | 2 |
| 176 | | | *Somatina plynusaria* (Walker, 1862) | f, w | 1 | | 3 |
| 177 | Lasiocampidae | Lasiocampinae | *Euthrix isocyma* (Hampson, 1892) | vc, w | 3 | 4 | 1 |
| 178 | Sphingidae | Smerinthinae | *Marumba dyras* (Walker, 1856) | vc, w | 2 | 4 | |
| 179 | | Macroglossinae | *Enpinanga assamensis* (Walker, 1856) | f, w | 1 | 2 | |
| 180 | | | *Macroglossum fritzei* Rothschild & Jordan, 1903 | vc, w | 1 | 4 | |
| 181 | | | *Macroglossum heliophila* Boisduval, [1875] | c, w | 1 | 4 | |
| 182 | | | *Macroglossum insipida* Butler, 1875 | s, l | 1 | | 4 |
| 183 | | | *Macroglossum pyrrhosticta* Butler, 1875 | f, w | 2 | | 1 |
| 184 | | | *Theretra latreillii* Macleay, 1826 | f, w | 2 | 1 | |
| 185 | Eupterotidae | Eupterotinae | *Apha* sp. A / nov. undescribed | NT **HK**; c, w | 2 | 1,2 | |
| 186 | Bombycidae | Bombycinae | *Ocinara albicollis* (Walker, 1862) | f, w | 1 | | 4 |
| 187 | | Prismostictinae | *Prismosticta hyalinata* Butler, 1885 | u, w | 5 | | 2,3,4 |
| 188 | Notodontidae | Dudusinae | *Netria viridescens* Walker, 1855 | c, w | 1 | 4 | |
| 189 | | Biretinae | *Gargetta divisa* Gaede, 1930 | c, w | 2 | 4 | |
| 190 | | | *Porsica curvaria* (Hampson, 1892) | u, l | 1 | | 4 |
| 191 | | Stauropinae | *Antiphalera exquisitor* Schintlmeister, 1989 | c, w | 1 | | 1 |
| 192 | | Pygaerinae | *Micromelalopha baibarana* Matsumura, 1929 | c, w | 1 | 1 | |
| 193 | Micronoctuidae | Belluliinae | *Bellulia galsworthyi* Fibiger, 2008 | NT **HK**; s, w | 1 | 2 | |
| 194 | Noctuidae | Acontiinae | Acontiinae genus & sp. B | **HK** r, rd | 3 | 1,2 | |
| 195 | | | *Enispa elataria* (Walker, 1861) | c, w | 3 | | 2,4 |
| 196 | | Acronictinae | *Belciana scorpio* Galsworthy, 1997 | **HK**; f, l | 2 | 4 | |
| 197 | | | *Tycracrona obliqua* Moore, 1882 | f, l | 1 | | 3 |
| 198 | | Aganainae | *Asota caricae* (Fabricius, 1775) | c, w | 5 | 1 | 1,2,3 |
| 199 | | | *Asota heliconia* (Linnaeus, 1758) | c, w | 3 | 2 | 1,2 |
| 200 | | | *Asota plaginota* Butler, 1875 | c, w | 1 | | 1 |
| 201 | | Agaristinae | *Mimeusemia postica* (Walker, 1862) | c, w | 1 | 1 | |

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| Species number | Family | Subfamily | *species* Species Author(s) | HK Status & Distribution | Total Count | Traps 24/4 | Traps 16/10 |
|---|---|---|---|---|---|---|---|
| 202 | | | *Sarbanissa albifascia* (Walker, 1865) | s, rd | 1 | 2 | |
| 203 | | Araeopteroninae | *Araeopteron amoenum* Inoue, 1958 | r, rd | 1 | | 4 |
| 204 | | | Araeopteroninae sp. A | r, rd | 1 | 1 | |
| 205 | | Arctiinae | *Barsine striata* (Bremer & Grey, 1852) | vc, w | 1 | | 3 |
| 206 | | | *Brunia antica* (Walker, 1854) | vc, w | 2 | 1,4 | |
| 207 | | | *Creatonotos transiens* (Walker, 1855) | c, w | 23 | All | |
| 208 | | | *Diduga flavicostata* (Snellen, 1878) | c, w | 1 | 2 | |
| 209 | | | *Eilema fuscodorsalis* (Matsumura, 1930) | c, w | 5 | 1,4 | 4 |
| 210 | | | *Eugoa brunnea* Hampson, 1914 | f, l | 3 | 2,4 | 4 |
| 211 | | | *Lyclene acteola* (Swinhoe, 1903) | u, l | 3 | 2 | |
| 212 | | | *Macrobrochis gigas* (Walker, 1854) | f, w | 1 | 2 | |
| 213 | | | *Microlithosia shaowuica* Daniel, 1954 | f, l | 4 | 1 | 3 |
| 214 | | | *Pelosia* sp. indet. A | dd (r, rd) | 1 | 2 | |
| 215 | | | *Schistophleps bipuncta* Hampson, 1891 | vc, w | 3 | 1,3,4 | |
| 216 | | | *Tigrioides immaculata* (Butler, 1880) | c, w | 3 | 2,4 | |
| 217 | | Aventiinae | *Cerynea contentaria* (Walker, 1861) | c, w | 2 | | 2,3 |
| 218 | | | *Cerynea discontenta* Galsworthy, 1998 | NT **HK**; f, w | 5 | 2,3,4 | 2,4 |
| 219 | | | *Cerynea ustula* (Hampson, 1898) | c, w | 4 | 1,4 | |
| 220 | | | *Corgatha ruficeps* (Walker, 1864) | vc, w | 6 | 1 | 2,3,4 |
| 221 | | | *Corgatha trichogyia* Hampson, 1907 | f, w | 1 | 2 | |
| 222 | | | *Metaemene atriguttata* (Walker, 1862) | f, w | 2 | 4 | 4 |
| 223 | | | *Oruza semilux* (Walker, 1865) | s, l | 1 | | 1 |
| 224 | | Bagisarinae | *Chasmina fasciculosa* (Walker, 1858) | u, l | 1 | 2 | |
| 225 | | | *Ramadasa pavo* (Walker, 1856) | r, rd | 1 | 1 | |
| 226 | | Calpinae | *Anachrostis* sp. nr. *nigripuncta* Hampson, 1893 | f, w | 5 | 2 | 2,3 |
| 227 | | | *Calyptra minuticornis* (Guenée, 1852) | f, w | 3 | 2 | 2 |
| 228 | | | *Cosmophila flava* (Fabricius, 1775) | c, w | 4 | | 2,3,4 |
| 229 | | | *Dierna patibulum* (Fabricius, 1794) | u, l | 5 | 2,4 | 4 |
| 230 | | | *Ecpatia longinqua* (Swinhoe, 1890) | c, w | 4 | | 2,4 |
| 231 | | | *Eudocima phalonia* (Linnaeus, 1763) | f, w | 1 | | 2 |
| 232 | | | *Goniocraspedon mistura* (Swinhoe, 1891) | f, l | 1 | | 4 |
| 233 | | | *Gonitis mesogona* Walker, [1858] 1857 | c, w | 2 | 4 | |
| 234 | | | *Oraesia emarginata* (Fabricius, 1794) | f, w | 3 | | 1,2 |
| 235 | | Catocalinae | *Arsacia rectalis* (Walker, 1863) | c, w | 1 | | 3 |
| 236 | | | *Bastilla absentimacula* (Guenée, 1852) | c, l | 1 | 1 | |
| 237 | | | *Bastilla analis* (Guenée, 1852) | f, l | 2 | | 3 |
| 238 | | | *Bastilla crameri* (Moore, [1885] 1884-1887) | u, l | 1 | 2 | |
| 239 | | | *Bastilla maturata* (Walker, 1858) | f, w | 1 | 4 | |
| 240 | | | *Bastilla maturescens* (Walker, 1858) | u, l | 3 | 4 | 3 |
| 241 | | | *Bastilla simillima* (Guenée, 1852) | u, l | 4 | 4 | 3 |
| 242 | | | *Blasticorhinus enervis* (Swinhoe, 1890) | f, w | 3 | 4 | 2 |
| 243 | | | *Blasticorhinus rivulosa* (Walker, 1865) | f, w | 1 | 3 | |
| 244 | | | *Bocula diffisa* (Swinhoe, 1890) | u, w | 2 | 1 | 1 |
| 245 | | | *Bocula marginata* (Moore, 1882) | c, w | 3 | 4 | 2 |
| 246 | | | *Britha pactalis* (Walker, [1859] 1858) | u, l | 2 | 4 | 4 |
| 247 | | | *Calesia haemorrhoa* Guenée, 1852 | r, rd | 2 | | 1,2 |
| 248 | | | *Chalciope mygdon* (Cramer, 1777) | f, w | 3 | | 1,2,4 |
| 249 | | | *Chorsia albiscripta* (Hampson, 1897) | c, w | 1 | | 3 |
| 250 | | | *Crithote horridipes* Walker, 1864 | c, w | 3 | 4 | |
| 251 | | | *Dysgonia stuposa* (Fabricius, 1794) | f, w | 1 | | 3 |
| 252 | | | *Ercheia cyllaria* (Cramer, 1779) | c, w | 4 | 2 | 2,3 |

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vr – very rare r – rare s – scarce u – uncommon
f – frequent c – common vc – very common
rd – restricted l – local w – widespread
dd – data deficient NR – new record for Hong Kong

| Species number | Family | Subfamily | *species* Species Author(s) | HK Status & Distribution | Total Count | Traps 24/4 | Traps 16/10 |
|---|---|---|---|---|---|---|---|
| 253 | | | *Ericeia elongata* Prout, 1929 | c, w | 1 | | 3 |
| 254 | | | *Ericeia inangulata* (Guenée, 1852) | u, l | 5 | 2,4 | 4 |
| 255 | | | *Ericeia subcinerea* (Snellen, 1880) | vc, w | 3 | 4 | 3,4 |
| 256 | | | *Erygia apicalis* Guenée, 1852 | c, w | 3 | 1,4 | |
| 257 | | | *Gesonia obeiditalis* Walker, [1859] 1858 | c, w | 1 | | 4 |
| 258 | | | *Hepatica irrorata* (Wileman & South, 1917) | s, rd | 1 | | 4 |
| 259 | | | *Hypopyra contractipennis* (Joannis, 1912) | f, l | 1 | | 1 |
| 260 | | | *Hypopyra vespertilio* (Fabricius, 1787) | c, w | 2 | 2,3 | |
| 261 | | | *Ischyja manlia* (Cramer, 1766) | c, w | 2 | 4 | 4 |
| 262 | | | *Lophathrum comprimens* (Walker, 1858) | c, w | 4 | 1 | 3,4 |
| 263 | | | *Loxioda similis* (Moore, 1882) | f, w | 1 | | 3 |
| 264 | | | *Maguda suffusa* (Walker, 1863) | c, w | 3 | 2,4 | 3 |
| 265 | | | *Mecodina agrestis* (Swinhoe, 1890) | f, l | 1 | 4 | |
| 266 | | | *Mecodina diastriga* Hampson, 1926 | r, rd NR | 1 | 4 | |
| 267 | | | *Ophiusa tirhaca* (Cramer, 1780) | u, l | 1 | 4 | |
| 268 | | | *Oxyodes scrobiculata* (Fabricius, 1775) | c, w | 2 | 1 | |
| 269 | | | *Plecoptera luteiceps* (Walker, 1865) | c, w | 1 | 3 | |
| 270 | | | *Pseudogyrtona perversa* (Walker, 1863) | r, rd | 8 | 1,4 | 3,4 |
| 271 | | | *Saroba pustulifera* Walker, 1865 | c, w | 3 | 1,3 | 3 |
| 272 | | | *Sarobides inconclusa* (Walker, [1863] 1864) | f, l | 1 | | 4 |
| 273 | | | *Sympis rufibasis* Guenée, 1852 | c, w | 3 | 2 | 3,4 |
| 274 | | | *Tamba apicata* (Hampson, 1902) | c, l | 1 | 2 | |
| 275 | | | *Taviodes fulvescens* Hampson, 1926 | s, rd | 1 | | 3 |
| 276 | | | *Tephriopis divulsa* (Walker, 1865) | c, w | 1 | | 3 |
| 277 | | | *Ugia purpurea* Galsworthy, 1997 | NT **HK**; vc, w | 5 | 1,2,4 | 3,4 |
| 278 | | Condicinae | *Condica conducta* (Walker, [1857] 1856) | c, w | 16 | 2,3,4 | 2,3,4 |
| 279 | | Erebinae | *Erebus ephesperis* (Hübner, [1823] 1816) | c, w | 1 | 4 | |
| 280 | | | *Mocis frugalis* (Fabricius, 1775) | c, w | 1 | | 3 |
| 281 | | | *Mocis undata* (Fabricius, 1775) | c, w | 6 | 1,4 | 1,4 |
| 282 | | | *Pantydia metaspila* (Walker, [1858] 1857) | r, rd | 1 | 4 | |
| 283 | | | *Rema costimacula* (Guenée, 1852) | vc, w | 4 | 2 | 3,4 |
| 284 | | | *Rhesala imparata* Walker, 1858 | c, w | 1 | | 4 |
| 285 | | Eriopinae | *Callopistria apicalis* (Walker, 1855) | c, w | 1 | | 3 |
| 286 | | | *Callopistria exotica* (Guenée, 1852) | c, w | 5 | 3 | 3,4 |
| 287 | | Eublemminae | *Eublemma albostriata* Wileman & West, 1929 | f, l | 1 | 2 | |
| 288 | | | *Eublemma baccalix* (Swinhoe, 1886) | f, l | 1 | 3 | |
| 289 | | | *Eublemma ragusana* (Freyer, 1845) | c, w | 6 | All | |
| 290 | | Eustrotiinae | *Amyna octo* (Guenée, 1852) | f, w | 2 | | 3,4 |
| 291 | | | *Amyna punctum* (Fabricius, 1794) | f, w | 3 | 1 | 3 |
| 292 | | | *Maliattha separata* Walker, 1863 | f, w | 2 | | 2,4 |
| 293 | | | *Maliattha signifera* (Walker, [1858] 1857) | c, w | 1 | 3 | |
| 294 | | | *Pseudeustrotia semialba* (Hampson, 1894) | c, w | 2 | 3,4 | |
| 295 | | Euteliinae | *Anuga multiplicans* (Walker, 1858) | f, w | 1 | 2 | |
| 296 | | Hadeninae | *Athetis bremusa* (Swinhoe, 1885) | c, w | 1 | | 3 |
| 297 | | | *Athetis cognata* (Moore, 1882) | c, w | 5 | | 2,3,4 |
| 298 | | | *Athetis hongkongensis* Galsworthy, 1997 | NT **HK**; c, w | 2 | 1,4 | |
| 299 | | | *Athetis obtusa* (Hampson, 1891) | r, rd | 4 | 4 | |
| 300 | | | *Athetis ochracea* (Hampson, 1894) | u, l | 1 | | 3 |
| 301 | | | *Athetis thoracica* (Moore, [1885] 1884-1887) | f, w | 2 | | 2,4 |
| 302 | | | *Mythimna moorei* (Swinhoe, 1902) | r, rd | 1 | | 1 |
| 303 | | | *Mythimna reversa* (Moore, [1885] 1884-1887) | c, w | 6 | | 2,3,4 |

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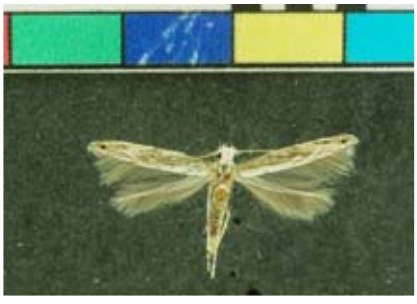
| Species number | Family | Subfamily | *species* Species Author(s) | HK Status & Distribution | Total Count | Traps 24/4 | Traps 16/10 |
|---|---|---|---|---|---|---|---|
| 304 | | | *Spodoptera litura* (Fabricius, 1775) | c, w | 5 | | 2,3,4 |
| 305 | | | *Tiracola aureata* Holloway, 1989 | c, w | 1 | | 1 |
| 306 | | | *Trachea auriplena* (Walker, 1857) | f, w | 1 | 4 | |
| 307 | | Herminiinae | *Adrapsa ablualis* Walker, [1859] 1858 | c, w | 1 | | 3 |
| 308 | | | *Bertula abjudicalis* Walker, [1859] 1858 | f, l | 3 | 2,4 | |
| 309 | | | *Hadennia jutalis* (Walker, [1859]) | c, w | 3 | 1,3,4 | |
| 310 | | | Herminiinae genus & sp. A | r, rd | 2 | | 1 |
| 311 | | | *Hydrillodes abavalis* (Walker, [1859] 1858) | c, w | 1 | 4 | |
| 312 | | | *Hydrillodes lentalis* Guenée, 1854 | c, w | 1 | 3 | |
| 313 | | | *Nodaria externalis* Guenée, 1854 | c, w | 9 | 1 | 2,3,4 |
| 314 | | | *Polypogon biasalis* (Walker, 1858) | f, w | 3 | | 1 |
| 315 | | | *Polypogon fractalis* (Guenée, 1854) | f, w | 9 | 2,3,4 | 3,4 |
| 316 | | | *Progonia oileusalis* (Walker, 1858) | c, w | 2 | | 4 |
| 317 | | | *Simplicia bimarginata* Walker, [1863] | f, l | 1 | | 3 |
| 318 | | | *Simplicia niphona* (Butler, 1878) | c, w | 1 | 3 | |
| 319 | | Hypeninae | *Hypena conscitalis* Walker, [1866] 1865 | s, rd | 1 | | 1 |
| 320 | | | *Hypena indicatalis* Walker, [1859] 1858 | f, w | 1 | | 3 |
| 321 | | | *Hypena jocosalis* Walker, [1859] 1858 | s, rd | 1 | 1 | |
| 322 | | | *Hypena occatus* Hampson, 1882 | f, w | 1 | 1 | |
| 323 | | | *Hypenagonia* sp. A | vr, rd **NR** | 1 | 1 | |
| 324 | | | *Lysimelia alstoni* Holloway, 1979 | f, w | 2 | | 4 |
| 325 | | | *Lysimelia neleusalis* Walker, [1859] 1858 | f, w | 1 | | 4 |
| 326 | | | *Naarda ochreistigma* (Hampson, 1893) | f, rd | 4 | 2 | |
| 327 | | | *Rhynchina columbaris* (Butler, 1889) | r, rd | 1 | 2 | |
| 328 | | Hypenodinae | *Luceria oculalis* (Moore, 1877) | f, w | 1 | | 2 |
| 329 | | | *Luceria striata* Galsworthy, 1997 | **VU HK**; f, w | 1 | 2 | |
| 330 | | Lymantriinae | *Arna bipunctapex* (Hampson, 1891) | f, w | 1 | | 2 |
| 331 | | | *Artaxa* sp. C nr. *guttata* Walker | s, l | 1 | 4 | |
| 332 | | | *Artaxa* sp. nr. *lubecula* Wileman, 1910 | f, w | 7 | 1,4 | |
| 333 | | | *Calliteara angulata* (Hampson, 1891) | u, l | 1 | | 3 |
| 334 | | | *Euproctis* sp. nr. *seitzei* Strand | u, w | 3 | 4 | 1 |
| 335 | | | *Orgyia postica* (Walker, 1855) | vc, w | 5 | 2,4 | 1,4 |
| 336 | | | *Perina nuda* (Fabricius, 1787) | c, w | 3 | 1,3,4 | |
| 337 | | Nolinae | *Barasa acronyctoides* Walker, 1862 | f, w | 1 | 4 | |
| 338 | | | *Garella ruficirra* (Hampson, 1905) | u, rd | 1 | 4 | |
| 339 | | | *Giaura multipunctata* Swinhoe, 1919 | c, l | 1 | | 4 |
| 340 | | | *Manoba brunellus* (Hampson, 1893) | c, w | 3 | | 4 |
| 341 | | | *Melanographia flexilineata* (Hampson, 1898) | c, w | 1 | | 3 |
| 342 | | | *Negeta signata* (Walker, [1863] 1864) | c, w | 1 | 2 | |
| 343 | | | *Nola marginata* Hampson, 1895 | f, w | 1 | 2 | |
| 344 | | | *Nola pumila* Snellen, 1875 | c, w | 4 | 1,2,4 | |
| 345 | | | *Nola* sp. C nr. *cretacea* | f, w | 2 | 1 | 3 |
| 346 | | | Nolini sp. indet. #1 | dd | 1 | 1 | |
| 347 | | | *Paracrama dulcissima* (Walker, [1863] 1864) | c, w | 1 | 2 | |
| 348 | | | *Selepa celtis* Moore, 1858 | f, w | 1 | | 4 |
| 349 | | | *Selepa discigera* (Walker, [1863] 1864) | u, l | 1 | 2 | |
| 350 | | Pangraptinae | *Pangrapta plumbilineata* Wileman & West, 1929 | c, w | 2 | 4 | |
| 351 | | Rivulinae | *Rivula inconspicua* (Butler, 1881) | f, w | 3 | | 2,4 |
| 352 | | | *Rivula sasaphila* Sugi, 1982 | u, l | 2 | 4 | |

## *Appendix 2* Voucher specimens retained for identification

Moths retained as voucher specimens (in the collection of KFBG) [key: **#** = possibly undescribed species]
The colour scale bar is 25mm / 1inch, each colour section = 1/6 inch (4.2mm)

| **Family**<br>**Subfamily**<br>**species** | **Voucher photo** | **site** | **notes** |
|---|---|---|---|
| Nepticulidae (maybe)<br>Nepticulidae ? sp. indet. 1<br>**#** |  | 2 | **1st HK record**<br><br>will have to dis-sect to establish i.d. to species; tentatively placed in Nepticulidae; very small, 6mm wingspan. |
| Tineidae<br>Hapsiferinae<br>*Dasyses* sp. nr. *correpta*<br>(2 specimens)<br>**#** |  | 1 | recently identified to genus (previously "Xyloryctinae sp. D", plate 2: 27 of Kendrick (2002[2003]), this is either a new species or *D. correpta* (Gaden Robinson, pers. comm.), described from Vietnam. Dis-section required. |
| Pyschidae<br>Psychidae sp. indet. 1<br>**#** |  | 4 | possible 1st HK record.<br>Will have to dis-sect to establish i.d. to species<br>Discussion with taxonomists based in the UK indicate this may be a member of the closely related family Eriocottidae |
| Gracillariidae<br>Gracillariinae<br>*Caloptilia* sp. nr. *protiella* |  | 2 | Will have to dis-sect to establish i.d. to species. allied to an undescribed species "*Caloptilia* sp. nr. *protiella*", for which there are several HK records<br>Scale in mm |
| Gracillariidae<br>Gracillariinae<br>*Epicephala* sp. indet. 1<br>**#** |  | 1 | possible 1st HK record. Will have to dis-sect to establish i.d. to species; the "*albifrons*" species group is a complex of cryptic species not yet fully worked out |

| Family<br>Subfamily<br>species | Voucher photo | site | notes |
|---|---|---|---|
| Gelechiidae<br>Dichomeridinae<br>*Dichomeris microsphena* |  | 3 | 6th site for Hong Kong |
| Gelechiidae<br>Dichomeridinae<br>*Dichomeris orientis* |  | 4 | 5th site for Hong Kong |
| Gelechiidae<br>Dichomeridinae<br>*Helcystogramma* sp. indet. B |  | 4 | possible 1st HK record.<br>Will have to dis-sect to establish i.d. to species |
| Gelechiidae<br>Chelariinae<br>*Faristenia* sp. indet. 1 |  | 4 | **1st HK record;**<br><br>Will have to dis-sect to establish i.d. to species |
| Gelechiidae<br>Chelariinae<br>*Hypatima arignota* |  | 4 | Previously no decent specimen in colln. KFBG. |

| Family<br>Subfamily<br>species | Voucher photo | site | notes |
|---|---|---|---|
| Lecithoceridae<br>Lecithocerinae<br>*Frisilia* sp. indet. 1<br>**#** |  | 4 | **1st HK record;**<br><br>Will have to dis-sect to establish i.d. to species<br>Specimen currently at Nankai University, Tianjin for identification |
| Lecithoceridae<br>Lecithocerinae<br>*Frisilia* sp. indet. 2<br>**#** |  | 4 | **1st HK record;**<br><br>Will have to dis-sect to establish i.d. to species<br>Specimen currently at Nankai University, Tianjin for identification |
| Oecophoridae<br>Stathmopodinae<br>*Stathmopoda* sp. indet. G |  | 3 | Will have to dis-sect to establish i.d. to species |
| Cosmopterigidae<br>Cosmopteriginae<br>Cosmopterigidae sp. indet. 1 **#** |  | 1 | possible 1st HK record.<br><br>Will have to dis-sect to establish i.d. to species |
| Tortricidae<br>Olethreutinae<br>*Fibuloides* sp. indet. 1 **#** |  | 1 | 2nd HK record.<br><br>Will have to dis-sect to establish i.d. to species, close to *Fibuloides japonica* |

| Family<br>Subfamily<br>species | Voucher photo | site | notes |
|---|---|---|---|
| Choreutidae<br>Choreutinae<br>*Choreutis fulminea* |  | 3 | 7th HK site |
| Pterophoridae<br>Pterophorinae<br>*Stenoptilodes taprobanes* |  | 1 | 3rd HK site, 7th HK record |
| Pyralidae<br>Galleriinae<br>*Tirathaba irrufatella* |  | 2 | Previously no decent specimen in colln. KFBG. |
| Pyralidae<br>Phycitinae<br>*Assara* sp. indet. 2 |  | 4 | possible 1st HK record.<br>Will have to dis-sect to establish i.d. to species |
| Pyralidae<br>Pyralinae<br>*Endotricha theonalis* |  | 1 | Previously no decent specimen in colln. KFBG. |

| Family<br>Subfamily<br>species | Voucher photo | site | notes |
|---|---|---|---|
| Crambidae<br>Acentropinae<br>*Eoophyla* sp. indet. A<br>(1 ♂ , 1 ♀) |  | 1,2 | Close to *Eoophyla sinensis* |
| Crambidae<br>Acentropinae<br>*Eristena* sp. nr. *bifurcalis* |  | 2 | 3rd HK site, 5th HK record |
| Crambidae<br>Acentropinae<br>*Agassiziella* sp. nr. *abidivisa* |  | 2 | 6th site for HK |
| Crambidae<br>Crambinae<br>*Chilo auricilia* |  | 2 | 2nd post 1993 record for HK |
| Geometridae<br>Geometridae<br>*Comibaena argentataria* |  | 4 | 7th HK record; mostly records from C & NE NT. |

| Family<br>Subfamily<br>species | Voucher photo | site | notes |
|---|---|---|---|
| Noctuidae<br>Lymantriinae<br>*Artaxa sp. C nr. guttata* |  | 4 | 9th HK record; mostly records from central NT |
| Noctuidae<br>Catocalinae<br>*Mecodina diastriga* |  | 4 | **1st HK record;**<br>needs genitalia dis-section to confirm id, though unlikely to be anything else; i.d. from Holloway 2005, Moths of Borneo parts 15 & 16 |
| Noctuidae<br>Arctiinae<br>*Pelosia* sp. indet. |  | 2 | 4th HK record |
| Noctuidae<br>Hypeninae<br>*Hypena indicatalis* |  | 3 | Previously no decent specimen in colln. KFBG. |
| Noctuidae<br>Hypeninae<br>*Hypenagonia* sp. indet. |  | 1 | **1st HK record;**<br>Will have to dis-sect to establish i.d. to species |
| Noctuidae<br>Nolinae<br>Nolini sp. indet. 1<br># |  | 1 | 2nd HK record;<br><br>also recorded from Hainan; possibly undescribed. Placement in Nolini is provisional, might be an *Acontia* sp. (Noctuidae, Acontiinae) |