

Hong Kong Entomological Bulletin



Hong Kong Entomological Bulletin

The Journal of the Hong Kong Entomological Society

Volume 3 (2) October 2011

Editors

Christophe Barthélémy (cbarthelemy@hkentsoc.org)

Graham Reels (gtreels@hkentsoc.org)

Contents

Keith, D. and Aston, P.

First record of *Phaeochrous hainanensis* Zhang, 1990 from mainland China along with some remarks about its status (Coleoptera, Hybosoridae). 3-4

Sakenin, H. and Samin, N.

A study on the genus *Dorcadion* Dalman (Coleoptera: Cerambycidae) from Golestan, Guilan, Mazandaran, Provinces of North Iran 5-8

Sterling, M.J. and Kendrick, P.

Species of moth (Lepidoptera) new to Hong Kong, recorded during September and October 2010: part 2, Pyraloidea 9-15

Cover photograph: *Orthaga olivacea* (Warren, 1891) (Pyralidae, Epipaschinae), **see page 11** (photo by Roger Kendrick)

The Hong Kong Entomological Bulletin publishes papers reporting on all aspects of Insecta in Hong Kong and the wider bioregion, including biology, behaviour, ecology, systematics, taxonomy, genetics and morphology. Papers can be original research results, reviews or short communications. There is no page limit to the manuscripts and no page charge will be applied. *At the editors' discretion, an independent review of submitted manuscripts will be sought from an appropriate authority.*

Guidelines for authors

<http://hkentsoc.org/publications/guidelines/content.html>

First record of *Phaeochrous hainanensis* Zhang, 1990 from mainland China along with some remarks about its status (Coleoptera, Hybosoridae).

Denis Keith¹ & Paul Aston²

1. Muséum des Sciences Naturelles et de la Préhistoire, 5 bis, boulevard de la Courtille, 28000 Chartres (France)

denis.keith@ville-chartres.fr

2. 2F, 102 Wang Tong, Mui Wo, Lantau, Hong Kong S.A.R. Peoples Republic of China. Paulaston70@hotmail.com

ABSTRACT

Phaeochrous hainanensis Zhang, 1990, originally described and known up to now only from the Island of Hainan, is recorded for the first time from mainland China. The status of this taxon is also briefly commented.

Key Words: China, Hong Kong, Hainan, Hybosoridae, *Phaeochrous*, distribution, status.

INTRODUCTION

Species of the genus *Phaeochrous* Castelnau, 1840 are primarily found in Asia and Africa (Kral & Löbl 2006; Kuijten 1978; Kuijten 1984), though some species reach the Australian mainland (Kuijten 1978; Keith 2002). Normally identification can only be ascertained by examination of the male genitalia, though there are a very few species that can be reliably identified on external characters only (Kuijten 1978).

The following species and subspecies are reported from China (Kral & Löbl 2006; Kuijten 1978; Kuijten, 1984; Zhang, 1990):

- Phaeochrous borealis* Kuijten, 1984 (Sichuan)
- P. dissimilis vietnamicola* Kuijten, 1978 (Guizhou)
- P. emarginatus davidis* Fairmaire, 1886 (Yunnan)
- P. emarginatus emarginatus* Laporte, 1840 (Guizhou, Guangxi, Yunnan, "Thibet" (?Sichuan))
- P. emarginatus suturalis* van Lansberge, 1885b: 394 (Xizang)
- P. hainanensis* Zhang 1990 (Hainan)
- P. intermedius intermedius* Pic, 1928 (Guizhou)
- P. pseudointermedius* Kuijten, 1978 (Guizhou)
- P. rufus* Pic, 1928 (Jiangxi, Sichuan)
- P. separabilis* Zhang, 1990 (Guangxi, Sichuan, Yunnan)

METHODS AND RESULTS

Phaeochrous-specimens were collected in Hong Kong (# 3 of 26.iv.07 (male); # 11 of 29.iv.07 (male); # 8 of 30.iv.08 (male); # 3 of 5.v.09; # 3 of 8.v.07 (male); # 2 of 12.v.06 (female); # 1 of 14.v.06 (male); # 1 of 17.v.11 (male) and # 2 of 17.v.11 (female) mating pair; # 47 of 18.v.10 (male); # 2 of 22.v.06; # 8 of May 2011 (female); # 9 of May 2011 (female); # 10 of May 2011 (male), Lantau, Wang Tong, all close to bright lights at night) by the second author and identified by the first author, the specimens remaining in their private collections.

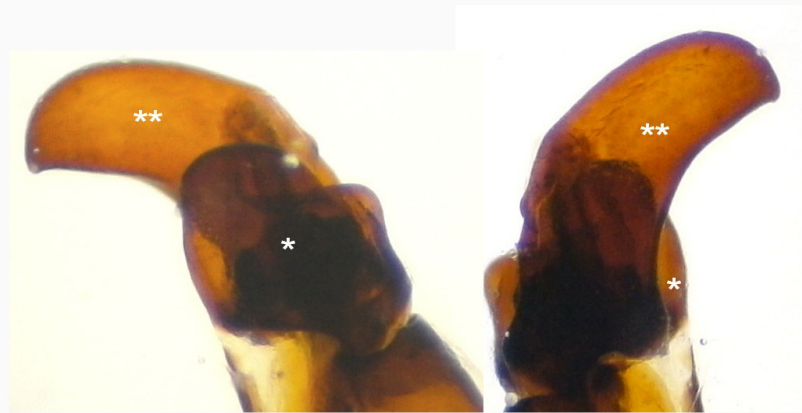
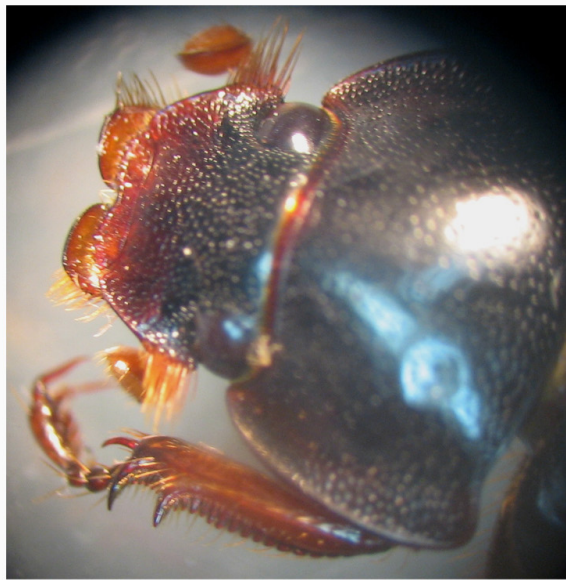
All males proved to be *P. hainanensis* we assume that the isolated females also belong to this taxon because they were found in the same restricted area as the males.

P. hainanensis was previously known only from the island of Hainan, thus constituting the first record of the species for the continent and, of course, mainland China. The flight period for this species appears to be limited (at least in Hong Kong) to less than a month from the end of April until the end of May.

The true status of this taxon is uncertain as the genitalia of *P. hainanensis* bear a striking resemblance to that of *P. borealis*. This is the most reliable character to separate most taxa in the genus. It is likely that after a larger amount of material becomes available *hainanensis* will be downgraded to a subspecies of, or merely sink in synonymy with, *borealis*. Zhang (1990) made no reference to Kuijten's description of *P. borealis* (1984) and he possibly overlooked it.

REFERENCES

- Keith D. 2002. *Phaeochrous nicolasi*, nouvelle espèce d'Australie (Col. Scarabaeoidea Hybosoridae). *Bulletin mensuel de la Société Linnéenne de Lyon*, 71 (9): 355-356.
- Kral D. & Löbl I. 2006. Hybosoridae: 96-97. In Löbl, I. & Smetana A (Eds). 2006. *Catalogue of Palaearctic Coleoptera. Volume 3. Scarabaeoidea - Scirtoidea - Dascilloidea - Buprestoidea - Byrrhoidea*. Apollo Books. Stenstrup, Denmark. 690 pp.
- Kuijten P.J. 1978. Revision of the Indo-Australian species of the genus *Phaeochrous* with notes on the African species. *Zoologische Verhandelingen*. Leiden, 165: 1-40.
- Kuijten P.J. 1984. Some new taxa of Asian Hybosorinae and notes on further species. *Proceedings of the Koninklijke Nederlandse Akademie van Wetenschappen*. Series C. Biological and Medical Sciences, 87(1): 43-49.
- Kuijten P.J. 1986. Revision of the African and Madagascan species of *Phaeochrous* Castelnau 1840. *Koninklijk Museum Midden Afrika Tervuren*, 249: 1-50.
- Zhang Y.W. 1990. Descriptions of two new species of the genus *Phaeochrous* Castelnau from China. *Sinozoologia*, 7: 145-147.



Phaeochrous hainanensis Zhang 1990.

Top left, 22 May 2006. Top right, 30 April 2008; Bottom left, head and pronotum, 5 May 2009; Bottom centre; right lateral view of parameres; Bottom right; left lateral view of paramere. All Lantau, Wang Tong close to light.

A study on the genus *Dorcadion* Dalman (Coleoptera: Cerambycidae) from Golestan, Guilan, Mazandaran, Provinces of North Iran

Hamid Sakenin¹ and Najmeh Samin²

- 1- Department of Plant Protection, Islamic Azad University, Qaemshahr Branch, Mazandaran, Iran; email: hchelave@yahoo.com
 2- Young Researchers Club, Science and Research Branch, Islamic Azad University, Tehran, Iran; email: n_samin63@yahoo.com

ABSTRACT

The fauna of *Dorcadion* spp. (Coleoptera: Cerambycidae: Lamiinae) from northern Iran is studied in this paper. A total of 43 species in four subgenera *Carinatodorcadion* (three species), *Cribridorcadion* (thirty seven species), *Maculatodorcadion* (one species) and *Megalodorcadion* (two species) were collected and identified.

Key words: *Dorcadion*, Dorcadionini, Lamiinae, Cerambycidae, Coleoptera, Iran

INTRODUCTION

Longhorn beetles (Cerambycidae) belong to one of the most attractive beetle groups, distributed all over the world. To date more than 25,000 species of Cerambycidae have been described worldwide (Sama *et al.*, 2010). The tribe Dorcadionini includes six genera, *Dorcadion* Dalman, 1817; *Neodorcadion* Ganglbauer, 1884; *Trichodorcadion* Breuning, 1942; *Iberodorcadion* Breuning, 1943; *Eodorcadion* Breuning, 1947 and *Politodorcadion* Danilevsky, 1996 (Breuning, 1946; Braun, 1979). The tribe Dorcadionini has Palaearctic (North Africa to China) and Oriental (India to Nepal) chorotypes. *Trichodorcadion* Breuning, 1942 has Oriental chorotype (India, Nepal). *Iberodorcadion* Breuning, 1943 has European (chiefly Iberian) chorotype (Spain to Poland). *Eodorcadion* Breuning, 1947 has East-Palaearctic chorotype (Russia, Siberia, Mongolia, China); *Politodorcadion* Danilevsky, 1996 has Asian chorotype (Kazakhstan, W Siberia, China) (Özdikmen, 2010).

The three north Iranian provinces of this study border the southern shores of the Caspian Sea. They comprise vast forests with great plant diversity. Forests tend to be extremely large and continuous areas with gradual boundaries, thus quantitative evaluation of controls becomes very difficult and expensive but remain important as many cerambycids can inflict serious damage to forests in northern Iran (Braun 1978; Vives 2000) and reduce the economic value of timber. Some unique ecological attributes are present in these relatively complex forest environments including a diversity of species, ages, intraspecific genetic composition, spacing and stocking

levels (Dahlsten & Mills, 1999). It is important to look at some of these ecological attributes in detail as the opportunities for biological control vary depending on the environment and species involved (Baker, 1972).

MATERIALS AND METHODS

The specimens were collected by using fermenting bait traps and other methods as described below. Collecting was carried out from several regions of three provinces of northern Iran namely, Golestan, Guilan and Mazandaran through 2005-2009. The traps were charged with a mixture containing wine (100 ml), water (900 ml), sugar (25 g), and vinegar (25 ml) (Ulu *et al.* 1995). For each tree species 10 logs, 60-80 cm in length and 15-25 cm in diameter, were cut and brought into forest depots. Logs of each tree species were stored separately as trap logs in each selected forest depot. In addition, trap logs, 3 m in length and 15-20 cm in diameter, were placed inside the forests to identify wood-destroying insect species in the forests. Trap logs were checked every 20-25 days, and logs with insect activity were brought into the laboratory to observe adult emergence. Logs left inside the forests were first cut into pieces 50-60 cm long and brought into the laboratory periodically. Collected specimens were prepared and identified using a stereomicroscope. This process continued until the end of insect emergence from each log (Akbulut *et al.*, 2008). Many of the materials were studied by the first author and Dr. D. Makhan (Willem Bilderdijkhove, the Netherlands), and some others by H. Borumand. In this paper identification, classification and nomenclature of the longhorn beetles suggested by Önalp (1990, 1991), Bense (1995), Althoff & Danilevsky (1997), Danilevsky (2004), Özdikmen (2008, 2010) and Özdikmen *et al.* (2010) is followed.

RESULTS

A total of 43 species of *Dorcadion* were collected from northern Iran. The list of species is given below.

Tribe Dorcadionini Latreille, 1825

= Dorcadionini Swainson & Shuckard, 1840 (incorrect original stem)

= Dorcadodiidae Gistel, 1856
 = Dorcadionitae Thomson, 1860
 = Dorcadionites Fairmaire, 1864
 = Dorcadionides Lacordaire, 1869
 = Dorcadiini LeConte, 1873
 = Dorcadionini Breuning, 1948, 1958, 1962
 Type genus: *Dorcadion* Dalman, 1817

Body large, oval and convex. Head voluminous and inclined, with wide membrane between clypeus and labrum (typical for *Eodorcadion*). Antennae short and thick, without ciliate undersides. The first antennal segment without, or at most with an open scar, longer to at most a little shorter than third segment than the third. Eyes small, narrow, emarginate, finely faceted, their lower lobes transverse or oblique. Pronotum in general is quadrangular or slightly more wider and with strong lateral conic tubercles. Prosternal process arched and unarmed. Metasternum very much short. The mesothoracic coxal cavities opened. Elytra strongly fused, imbricated, never dehiscent, oval, with or without distinct humeral carina. Elytra more or less tapering toward apex and toward base. Developed membranous hind wings absent. Wing almost completely reduced, normally very small. Elytra covered with recumbent pubescence and numerous stout erect setae. Legs short and thick; front femora protruding outside; middle tibiae with an external groove or sinus (Breuning, 1962; Villiers, 1978; Cherepanov, 1990; Vives, 2000; Danilevsky & Kasatkin, 2006).

List of *Dorcadion* species from north Iran

***Dorcadion (Carinatodorcadion) aethiops* (Scopoli, 1763)**

Material: Mazandaran province: Behshahr, July 2007.

***Dorcadion (Carinatodorcadion) carinatum* (Pallas, 1771)**

Material: Guilan province: Roodsar, August 2005. Mazandaran province: Ramsar, July 2007.

***Dorcadion (Carinatodorcadion) fulvum* (Scopoli, 1763)**

Material: Guilan province: Astara, September 2007.

***Dorcadion (Cribridorcadion) albonotatum* Pic, 1895**

Material: Golestan province: Golestan National Park, July 2006.

***Dorcadion (Cribridorcadion) atticum* Kraatz, 1873**

Material: Mazandaran province: Joibar, September 2006.

***Dorcadion (Cribridorcadion) beckeri* Kraatz, 1873**

Material: Mazandaran province: Savadkooh, August 2007.

***Dorcadion (Cribridorcadion) bistratum* Pic, 1898**

Material: Mazandaran province: Neka, July 2007.

***Dorcadion (Cribridorcadion) bithyniense* Chevrolat, 1856**

Material: Golestan province: Golestan National Park, July 2006. Mazandaran province: Nooshahr, August 2006.

***Dorcadion (Cribridorcadion) blanchardi* Mulsant & Rey, 1863**

Material: Guilan province: Chaboksar, September 2009.

***Dorcadion (Cribridorcadion) cinerarium* (Fabricius, 1787)**

Material: Mazandaran province: Ramsar, September 2005.

***Dorcadion (Cribridorcadion) culminicola* J.Thomson, 1868**

Material: Golestan province: Kordkoy, June 2006.

***Dorcadion (Cribridorcadion) decipiens* (Germar, 1824)**

Material: Guilan province: Fooman, August 2005.

***Dorcadion (Cribridorcadion) deyrollei* Ganglbauer, 1884**

Material: Mazandaran province: Noor, October 2007.

***Dorcadion (Cribridorcadion) equestre* (Laxmann, 1770)**

Material: Guilan province: Bandar-Anzali, September 2007.

***Dorcadion (Cribridorcadion) etruscum* (Rossi, 1790)**

Material: Mazandaran province: Nooshahr, August 2006. Guilan province: Lahijan, August 2008.

***Dorcadion (Cribridorcadion) gallipolitanum* J.Thomson, 1867**

Material: Guilan province: Chaboksar, September 2008.

***Dorcadion (Cribridorcadion) halepense* Kraatz, 1873**

Material: Mazandaran province: Babol, September 2005.

***Dorcadion (Cribridorcadion) hellmanni* Ganglbauer, 1884**

Material: Guilan province: Rasht, September 2007.

***Dorcadion (Cribridorcadion) iconiense* K. Daniel, 1901**

Material: Mazandaran province: Amol, September 2009.

***Dorcadion (Cribridorcadion) indutum* Faldermann, 1837**

Material: Mazandaran province: Savadkooh, August 2007.

***Dorcadion (Cribridorcadion) kasikoporanum* Pic, 1902**

Material: Golestan province: Golestan National Park, July 2006. Mazandaran province: Galogah, September 2007.

***Dorcadion (Cribridorcadion) lameeri* Théry, 1896**

Material: Mazandaran province: Qaemshahr, July 2007.

***Dorcadion (Cribridorcadion) lineatocolle* Kraatz, 1873**

Material: Golestan province: Ali-Abad, June 2006.

***Dorcadion (Cribridorcadion) lugubre* Kraatz, 1873**

Material: Mazandaran province: Chalus, October 2007.

***Dorcadion (Cribridorcadion) micans* J.Thomson, 1867**

Material: Guilan province: Rasht, September 2008.

***Dorcadion (Cribridorcadion) murrayi* Küster, 1847**

Material: Guilan province: Fooman, August 2005.

***Dorcadion (Cribridorcadion) olympicum* Kraatz, 1873**

Material: Mazandaran province: Babol, September 2006.

Mazandaran province: Savadkooh, August 2009.

***Dorcadion (Cribridorcadion) pedestre* (Poda von Neuhaus, 1761)**

Material: Mazandaran province: Shahsavar, September 2005.

***Dorcadion (Cribridorcadion) punctipenne* Küster, 1852**

Material: Mazandaran province: Chalus, October 2007.

***Dorcadion (Cribridorcadion) rosti* Pic, 1900**

Material: Mazandaran province: Fereydonkenar, August 2006.

***Dorcadion (Cribridorcadion) scopolii* (Herbst, 1784)**

Material: Golestan province: Minoodasht, July 2006.

***Dorcadion (Cribridorcadion) scrobicollae* Dalman 1817**

Material: Mazandaran province: Chalus, October 2007.

***Dorcadion (Cribridorcadion) semibrunneum* Pic, 1903**

Material: Guilan province: Roodbar, September 2008.

***Dorcadion (Cribridorcadion) semivelutinum* Kraatz, 1873**

Material: Mazandaran province: Savadkooh, August 2007.

***Dorcadion (Cribridorcadion) sodale* Hampe, 1852**

Material: Mazandaran province: Sari, July 2009.

***Dorcadion (Cribridorcadion) subinterruptum* Pic, 1900**

Material: Guilan province: Masal, August 2005.

***Dorcadion (Cribridorcadion) sulcipenne* Küster, 1847**

Material: Golestan province: Kordkoy, June 2006.

***Dorcadion (Cribridorcadion) tauricum* Walth, 1838**

Material: Mazandaran province: Mahmood-Abad, August 2006.

***Dorcadion (Cribridorcadion) theophilei* Pic, 1898**

Material: Mazandaran province: Shahsavar, September 2005. Guilan province: Lahijan, August 2008.

***Dorcadion (Cribridorcadion) weyersi* Fairmaire, 1866**

Material: Guilan province: Rasht, September 2007.

***Dorcadion (Maculatodorcadion) quadrimaculatum* Küster, 1848**

Material: Mazandaran province: Babol, September 2009.

***Dorcadion (Megalodorcadion) escherichi* Ganglbauer, 1897**

Material: Mazandaran province: Savadkooh, August 2007.

***Dorcadion (Megalodorcadion) parallelum* Küster, 1847**

Material: Guilan province: Astara, September 2007.

DISCUSSION

The collecting 43 *Dorcadion* species from northern Iran during this project established by the first author in 2005 indicates that the fauna of Iranian *Dorcadion* is diverse. Longhorn beetles are one of the most important pests of forests and may cause extensive timber damage. Determining the species diversity of these forest pests is very important for preventing severe damage to ecosystems, and would also permit the definition of efficient strategies for decreasing population densities and successful control. The fauna of Iranian Cerambycidae is poorly studied (Modarres Awal, 1997; Radjabi, 1991; Borumand, 2004; Sakenin et al., 2008, 2011) and therefore further studies are necessary in different provinces, especially those with vast forest ecosystems to determine the exact importance of these forest pests along with the identification of their host plants and natural enemies.

ACKNOWLEDGEMENTS

We are very grateful to H. Borumand and Gh.R. Radjabi, H. Özdikmen, E. Vives, P. Rapuzzi, S.W. Lingafelter and R. Vigneault for valuable helps in this research. The research was supported by Islamic Azad University (Qaemshahr Branch, and Young Researchers Club).

REFERENCES

- Akbulut, S., Keten, A. and Yuksel, B. 2008. Wood destroying insects in Düzce province. *Turkish J. Zoology* 32: 343-350.
- Althoff, J. and Danilevsky, M.L. 1997. *A check-List of longicorn beetles (Coleoptera, Cerambycoidea) of Europe*. Slovensko Entomološko Društvo Štefana Michielija, Ljubljana, 64 pp.
- Baker, W.L. 1972. Eastern forest insects. *U. S. Department of Agriculture & Forest Service Misc. Publ.* 1175, 642 pp.
- Bense, U. 1995. *Illustrated key to the Cerambycidae (excl. Dorcadionini) and Vesperidae of Europe*. Margraf Verlag, Germany, 512 pp.
- Borumand, H. 2004. The list of Cerambycidae (Coleoptera) in the Hayk Mirzayans Insect Museum of Plant Pests and

- Diseases Research Institute. *Insect Taxonomy Research Department* No. 10, 52 pp.
- Braun, W. 1978. Die Dorcadienausbeute der Forschungsreisen von W. Heinz 1963-1977, Faunistische Aufstellung, Beschreibung einer neuen Unterart und Bemerkungen zur Systematik wenig bekannter Arten (Coleoptera, Cerambycidae), *Nachrichtenblatt der Bayerischen Entomologen* 27 (6): 101-116.
- Braun, W. 1979. Beitrag zur Kenntnis der Gattung *Dorcadion* Systematisch neu bewertete Dorcadion-Formen (Col., Cerambycidae). *Nachrichtenblatt der Bayerischen Entomologen* 28 (5): 81-86.
- Breuning, S. 1946. Nouvelles formes de *Dorcadion*. *Miscellanea Entomologica*, 43: 93-132.
- Breuning, S. 1962. Revision der Dorcadionini. *Entomologische Abhandlungen und Berichte aus dem Staatlichen museum für Tierkunde in Dresden*, 27: 665.
- Cherepanov, A.I. 1990. *Cerambycidae of northern Asia*. Volume 3, Lamiinae, Part I. New Delhi, India: Amerind Publishing Company Pvt. Ltd., 300 pp.
- Dahlsten, D.L. and Mills, N.J. 1999. Biological control of forest insects. In: *Handbook of biological control: Principles and applications* (Bellows, T.S., Jr. & T.W. Fisher, eds.). Academic Press, San Diego, CA. 1046 pp.
- Danilevsky, M.L. 2004. *Systematic list of longicorn beetles (Cerambycoidea) of the territory of the former USSR* (on the base of "Systematic list of longicorn beetles of the USSR" by A.L. Lobanov, M.L.
- Danilevsky, S.V. Murzin, 1981, and computer databases by A.L. Lobanov, 1979-1990). <http://www.zin.ru/Animalia/Coleoptera/eng/dbase30.htm>.
- Danilevsky, M.L. and Kasatkin, D.G. 2006. Further investigation of Dorcadionini (Coleoptera: Cerambycidae) endophallus with a revision of taxonomical position of the genus *Trichodorcadion*
- Breuning, 1942. *Russian Entomol. J.* 15(4): 401-407.
- Modarres Awal, M. 1997. Family Cerambycidae, pp. 142-151. In: *List of agricultural pests and their natural enemies in Iran*. Ferdowsi University Press, 429 pp.
- Önalp, B. 1990. Systematic researches on *Dorcadion* Dalman, 1817 species in Turkey (Coleoptera, Cerambycidae: Lamiinae) I, *H. Ü. Eđitim Fakóltesi Dergisi* 5: 57-102.
- Önalp, B. 1991. Systematic researches on *Dorcadion* Dalman, 1817 species in Turkey (Coleoptera, Cerambycidae: Lamiinae) II. *H. Ü. Eđitim Fakóltesi Dergisi* 6: 191-227.
- Özdikmen, H. 2008. The longicorn beetles of Turkey (Coleoptera: Cerambycidae) Part III – Aegean Region. *Munis Entomology & Zoology* 3 (1): 355-436.
- Özdikmen, H. 2010. The Turkish Dorcadionini with zoogeographical remarks (Coleoptera: Cerambycidae: Lamiinae). *Munis Entomology & Zoology* 5(2): 380-498.
- Özdikmen, H., Güven, M. and Gören, C. 2010. Longhorned beetles fauna of Amanos Mountains, Southern Turkey (Coleoptera: Cerambycidae). *Munis Entomology & Zoology* 5, suppl.: 1141-1167.
- Radjabi, G.H. 1991. *Insects attacking rosaceous fruit trees in Iran*. Ministry of Iran Agriculture, Plant Pests and Diseases institute, Tehran, 221 pp.
- Sakenin Chelav, H., Eslami, B., Samin, N., Imani, S., Shirdel, F. and Havaskary, M. 2008. A contribution to the most important trees and shrubs as the hosts of wood-boring beetles in different regions of Iran and identification of many natural enemies. *J. Plant and Ecosystem* 16: 27-46.
- Sakenin, H., Samin, N., Moemen Beitollahi, S., Ezzatpanah, S., Havaskary, M., Rastegar, J., Valizadeh, A. and Shakouri, M.J. 2011. A study on the longhorn beetles (Coleoptera: Cerambycidae) from north-western Iran. *Calodema* 143: 1-19.
- Sama, G., Buse, J., Orbach, E., Friedman, A., Rittner, O. and Chikatunov, V. 2010. A new catalogue of the Cerambycidae (Coleoptera) of Israel with notes on their distribution and host plants. *Munis Entomology & Zoology* 5(1): 1-55.
- Ulu, O., Önuçar, A., Zümreođlu, A., Uzun, S., Ergüden, T. M., Aykaç, K., Kýlýç, M., Çakýr, O., Ceylan, S. and Koçlu, T. 1995. Kiraz bahçelerinde entegre mücadele araptýrma, geliptirme ve uygulama projesi. BKA/U17, 1. Dilim sonuç raporu (Unpublished report), Ýzmir, 84 pp.
- Villiers, A. 1978. Faune des Coléoptères de France I. Cerambycidae. *Encyclopédie Entomologique*, XLII, P. Lechevalier ed., Paris, 611 pp.

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

Mark J. Sterling¹ and Roger C. Kendrick²

1: 34 Beaumont Avenue, St Albans, Hertfordshire, England, AL1 4TJ.

2: C&R Wildlife, 129 San Tsuen Lam Tsuen, Tai Po, New Territories, Hong Kong, China. e-mail: hkmoths@gmail.com

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.

ACKNOWLEDGEMENTS

The authors wish to thank Kadoorie Farm & Botanic Garden Corporation for assistance with access to recording sites at KFBG (as part of the KFBG moth monitoring project), and to Kadoorie Institute, Shek Kong (The University of Hong Kong) for access to KISK. Additionally, we thank Prof. Frank Yu-Feng Hsu, National Changhua University of Education, Taiwan for reviewing the manuscript and the editors for their keen eyed comments that tidied up the final draft.

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)



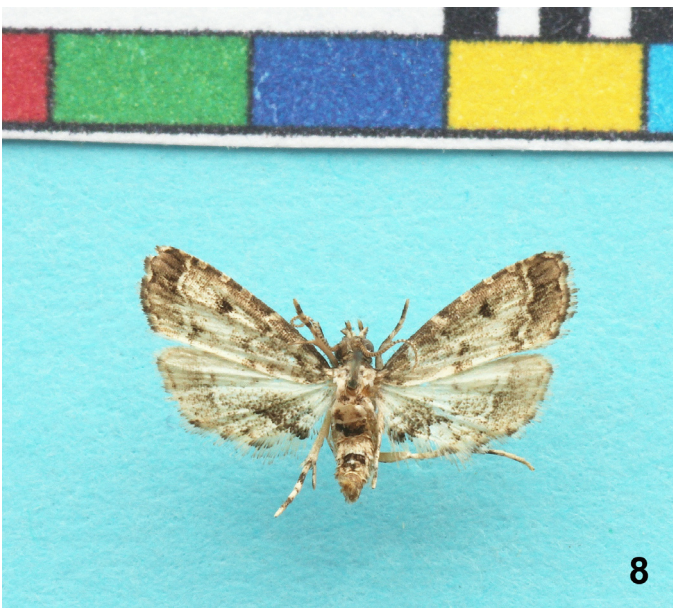
Figure 5a. *Pleuroptya plagiatalis* (Walker, 1859)



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



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



8

Figure 8. *Sufetula sunidesalis* Walker, 1859



11

Figure 11. *Tetricia caletoralis* Walker, 1859



9

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



12

Figure 12. *Yezobotys dissimilis* Yamanaka, 1958



10

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



13

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)

