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**Cover photograph:** *Loboscelidia levigata* Yao, Liu & Xu, 2010, photo by Christophe Barthélémy.

**Editors:** George Ho Wai-Chun (georgehwc@hotmail.com); Yiu Vor (yiuvor@hkentsoc.org)

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**The first record of a species in the aberrant subfamily Loboscelidiinae (Chrysididae) in Hong Kong,  
*Loboscelidia levigata* Yao, Liu & Xu, 2010**

Christophe Barthélémy

Sai Kung, Hong Kong. Email: chb99@netvigator.com

# ABSTRACT

Records are provided of a new species of chrysidid wasp *Loboscelidia levigata* Yao, Liu & Xu, 2010, to the Hong Kong fauna. This paper is based on two specimens obtained by the author with a Malaise trap at Pak Sha O, Sai Kung Country Park.

**Key words:** New record, *Loboscelidia*, Loboscelidiinae, Chrysididae, Hong Kong, Pak Sha O

# INTRODUCTION

The Loboscelidiinae is a small aberrant and highly modified subfamily of the Chrysididae. It includes only two genera: *Loboscelidia* comprising 47 known species and *Rhadinosceldidia* with three species (Rosa et al., 2014; Kimsey, 2012). The taxonomic placement of the genus *Loboscelidia* varied considerably until Day (1978) placed it in Chrysididae based on abdominal morphology. In fact, nearly 20 years earlier, Maa (1961) was changing the “agreed” view that *Loboscelidia* was in the Diapriidae (Proctotrupoidea) and proposed to create a new family, the Lobosceliidae in the superfamily Bethyloidea and recognised its affinities with Amiseginae. Kimsey 2012 gives a summarised account of the historic placement of the genus *Loboscelidia*.

Loboscelidines are easily characterised by several unusual features such as the insertion of the antennae on a shelf-like extension in the middle of the face, the vertex extended posteriorly forming a curved plate fringed with dense setae and the very large tegula covering the base of both wings.

Specimens are rarely collected making these wasps rather cryptic, although their real abundance may in fact be higher than expected. It is likely that collecting methods have not been sufficiently targeted and the subfamily is under-sampled (Kimsey, 2012).

Most specimens existing in collections are males (85%), which further complicates the matter since sexes are strongly dimorphic. It is known that males are less stout than females and have five visible abdominal segments while females have four.

The subfamily is essentially south Asian but four species are found in northern Australia and seven in China (Rosa et al., 2014), Figure 1 indicates the known distribution of the genus *Loboscelidia*. It is likely that the loboscelidine fauna is highly endemic due to its poor flight capabilities, as evidenced by the weakly veined wings and enlarged tegula, and new species are bound to be found in the

numerous islands of south-east Asia and Indonesia but also elsewhere in its geographic range and new species do appear regularly in the literature.

The Chinese species of *Loboscelidia* are, to date:

***Loboscelidia* Westwood, 1874: 172**

**Type:** *Loboscelidia rufescens*, Male Syntypes, “Insulam Malayanam, Sula Isld.” [Plate XX, Fig.13.]. OUMNH

***guangxiensis* Xu, Weng & He, 2006: 208**

Holotype male; China: Guangxi, Jiuwandashan

Distribution: China: Guangdong, Guangxi. SCAU

***hei* Liu, Yao & Xu, 2010: 642**

Holotype female; China: Fujian, Mt Meihua. SCAU

Distribution: China: Fujian

***levigata* Yao, Liu & Xu, 2010: 528**

Holotype male; China: Guangdong, Chebaling National Nature Reserve. SCAU

Distribution: China: Fujian, Guangdong; **Hong Kong** [new record]

***maai* (Lin, 1964): 238**

*Scelidoloba maai* Lin. Holotype male; Taiwan, Paomingszu. TARI

Distribution: Taiwan

***sinensis* Kimsey, 1988: 76**

Holotype male; China: Hainan. NHML

Distribution: China: Zhejiang, Fujian, Guangdong, Hainan

***striolata* Yao, Liu & Xu, 2010: 530**

Holotype male; China: Guangdong, Nanling National Nature Reserve. SCAU

Distribution: China: Zhejiang, Guangdong

***zengae* Liu, Yao & Xu, 2010: 643**

Holotype female; China: Hainan, Wuzhishan. SCAU

Distribution: China: Hainan

Abbreviations used:

NHML: The Natural History Museum, London, UK

OUMNH: Oxford University Museum of Natural History, Oxford, UK

SCAU: Department of Entomology, College of Natural Resources and Environment, South China Agricultural University, Guangzhou, China

TARI: Entomology Collection, Taiwan Agricultural Research Institute, Taichung, Taiwan

The biology of the genus is poorly known; however, mandibles and ovipositor morphology resembles that of the subfamily Amiseginae suggesting that it may be parasitic on eggs of Phasmidae (Kimsey, 1990, 2012) and a couple of species have been reared from phasmid eggs (Krombein, 1983; Kimsey, 2012). Other structural modifications have lead workers to add that it may be myrmecophilous (Fouts, 1922; Kimsey 2012), searching for phasmid eggs collected and stored by ants.

## MATERIALS & METHOD

The two specimens were caught using a Malaise trap placed in the author's garden at Pak Sha O, Sai Kung Country Park, Hong Kong (circa 22.25°N- 114.19°E, UTM: 50Q KK 242 849, 70masl). It is a resident trap and has been in place since 2004, the collecting bottle has been changed on average every 14 days.

The garden is sited on the northern forested side of a small hill (400m) and is a reclaimed area over mostly what was a *Citrus* spp. orchard. The garden structure is early successional (cyclic maintenance episodes) and comprises various native plants, annual and perennial. The garden is fringed on the hill side (South) by a mature secondary forest (50+ years), while on the valley side (North) lies the small village (19 houses) and an abandoned paddy field (now a lowland wetland).

Details of the two specimens caught are:

Male, Pak Sha O (Malaise trap), HK, ref.: M078.C.Hy.7, UTM: 50Q KK 242 849, 70m, coll. Christophe Barthélémy, 16 June 2010 to 03 July 2010.

The other is:

Male, Pak Sha O (Malaise trap), HK, ref.: M300.C.Hy.3, UTM: 50Q KK 242 849, 70m, coll. Christophe Barthélémy, 24 June 2017 to 08 July 2017.

Figures 2 & 3 show habitus and details of the head and tibia.

## RESULTS & DISCUSSION

It is a new species for the Hong Kong fauna, although not overly surprising, since the holotype was collected in Guangdong, the neighbouring province.

All the Hymenoptera specimens caught in this Malaise trap were systematically extracted since 2008, and sorted in two groups, Aculeata on one side and non-aculeate Hymenoptera on the other. The aculeates were systematically kept/recorded in the author's collection,

whilst the remaining Hymenoptera were sent to various specialists and institutions around the world, notably the London Natural History Museum.

It is interesting to note that the same trap has yielded several specimens of three species of Amiseginae, while another trap placed elsewhere in Hong Kong, yielded one additional species of amisegine (all yet to be identified) but only two specimens of a single species of *Loboscelidia*.

We could assume that the abundance and possibly diversity of loboscelidines may somehow correlate with the diversity and abundance of phasmids in the territory (18 species; Ho, 2013) and that of amisegines, particularly in Pak Sha O, where stick insects were varied and abundant.

However, having collected only two specimens in the last 10 years or so may be symptomatic of the age-old confusion that this cryptic genus has created; the author most likely misplaced additional specimens in non-aculeate hymenoptera and soon after dispatched them around the world where future workers may one day rediscover them.

## ACKNOWLEDGMENTS

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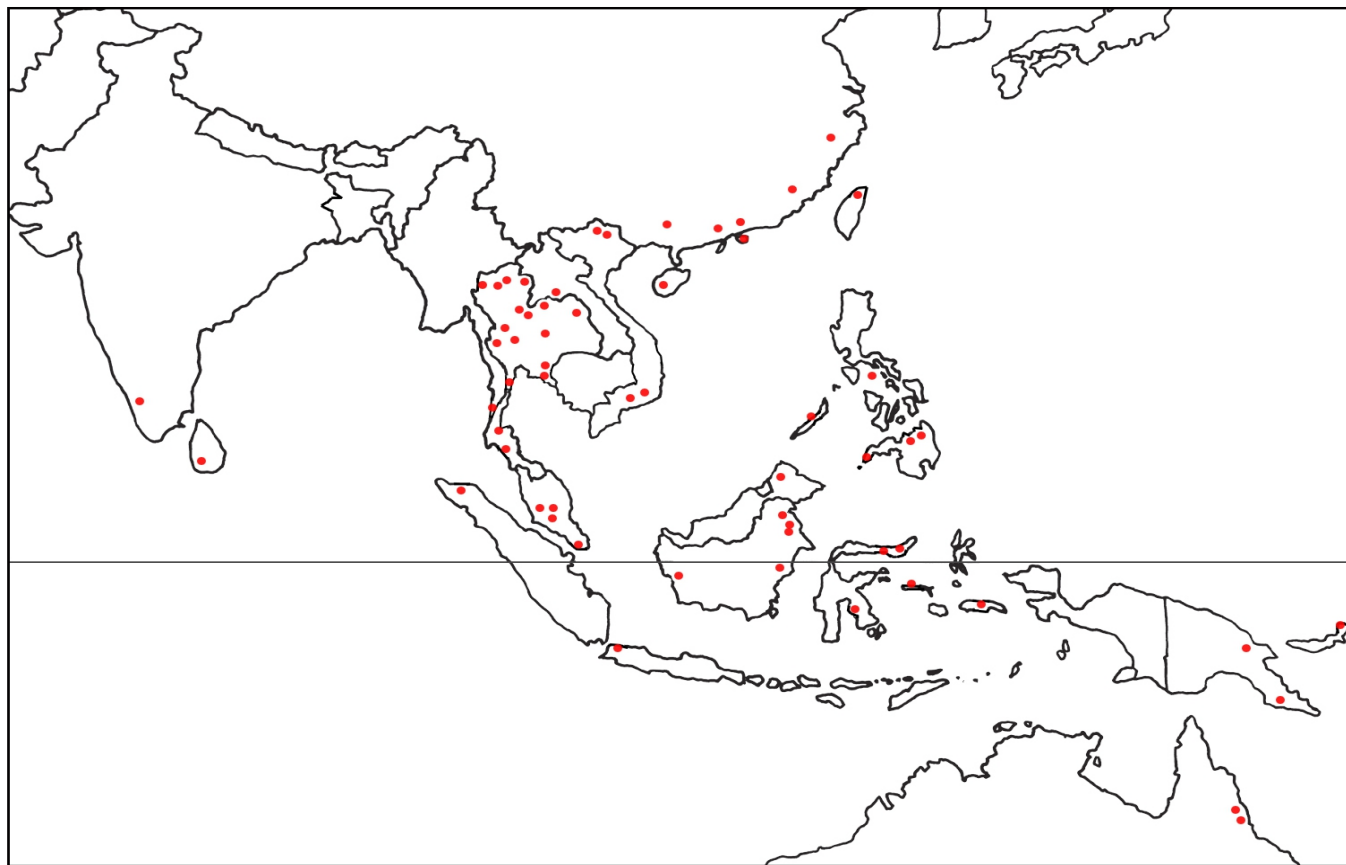
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## FIGURES



**Figure 1.** Distribution of the genus *Loboscelidia*. Map redrawn from Kimsey (2012).



Pak Sha O, HK  
 50Q KK 242 849; 70m  
 C. Barth. 24.vi-08.vii.17  
 Ref: M300.C.Hy.3

**Figure 2.** Habitus of *Loboscelidia levigata*.



**Figure 3.** Head and hind leg showing the membranous feature on tibia.

**First record of *Neososibia brevispina* Chen & He, 2000 from Hong Kong  
(Phasmida: Diapheromeridae: Necrosiinae)**

George Ho Wai-Chun

P. O. Box No.73749, Kowloon Central Post Office, Hong Kong. Email: georgehwc@hotmail.com

### ABSTRACT

*Neososibia brevispina* Chen & He, 2000 is reported for the first time from Hong Kong.

**Key words:** Stick insects, *Neososibia*, new record, Hong Kong

香港新紀錄種 - 短刺新健螞 *Neososibia brevispina* Chen & He, 2000 (螞目: 笛螞科: 長角枝螞亞科)

何維俊  
香港九龍中央郵政信箱73749號

摘要: 本文記述香港長角枝螞亞科1新紀錄種: 短刺新健螞 *Neososibia brevispina* Chen & He, 2000。

關鍵字: 竹節蟲, 新健螞屬, 新紀錄, 香港

### INTRODUCTION

The earliest work on the taxonomy of Hong Kong stick insects was provided by Brock and Seow-Choen (2000), who recorded seven genera and nine species. Later, four species including *Entoria hei* Ho, 2013, *Necrosia shukayi* (Bi, Zhang & Lau, 2001), *Planispectrum hongkongense* Zompro, 2004, and *Sinophasma mirabile* Günther, 1940 were added to the list of Hong Kong stick insects (Bi et al., 2001; Zompro, 2004; Ho, 2008, 2013a). The most recent comprehensive work on the Hong Kong stick insects was provided by Ho (2013b), in which 15 genera and 18 species were recorded. Three species, *Dajaca napolovi* Brock, 2000, *Micadina yingdeensis* Chen & He, 1992 and *Tirachidea jianfenglingensis* (Bi, 1994), were reported for the first time from Hong Kong by Ho (2013b).

The present author has conducted regular stick insect surveys throughout the territory since 2008, in the course of which an adult female *Neososibia brevispina* Chen & He, 2000 was found on Ma On Shan in June 2016. This represents the first record of the genus *Neososibia* Chen & He, 2000 from Hong Kong. After this addition, 16 genera and 19 species are currently attributed to the Phasmida of Hong Kong.

### MATERIALS & METHOD

The systematic treatment is according to Chen and He (2008) and Hennemann et al. (2008). Description of colouration is based on the dried specimen. Illustrations are based on the examined material which was dried and pinned. No food plant eaten by the collected specimens was observed. No egg was collected.

Measurements are given in mm. The mentioned material is deposited in the Museum of Biology, Sun Yat-Sen University, Guangzhou, Guangdong (SYSBM) and private collection of George Ho Wai-Chun, Hong Kong (GH).

### RESULTS

#### *Neososibia* Chen & He, 2000

**Type-species:** *Neososibia brevispina* Chen & He, 2000: 31, by original designation.

**Distributions:** China (Guangdong, Guangxi, Guizhou and Hong Kong).

**Notes:** Currently three *Neososibia* species, *N. brevispina* Chen & He, 2000, *N. jinxiuensis* Chen & He, 2008 and *N. guizhouensis* Chen & Ran, 2002, are known.

#### *Neososibia brevispina* Chen & He, 2000 (Figs. 1-3)

**Type:** Holotype, ♀, Fengkai, Guangdong, China, 24 May 1986, Lan Dean (SYSBM).

**Other material examined:** 1♀, Ma On Shan, Hong Kong, 4 June 2016, George Wai-Chun Ho, GH-01040 (GH).

**Description of female (Figs. 1-3):** Large size. Body slender and cylindrical. General colouration of body brown. Legs brown with black markings. Head oval. Vertex unarmed. Occiput gently convex, posterior margin with indistinct swellings. Compound eyes small and rounded. Antennae long and filiform, densely covered with short bristles; scapus longer than pedicellus, almost as long as third segment. Pronotum rectangular, longer than wide. Mesonotum parallel-sided, longer than combined length of metanotum and median segment, with a few short spines along each side of median longitudinal line, lateral margins with a few small granules. Metanotum distinctly longer than median segment, median longitudinal line indistinct. Abdomen cylindrical. Seventh sternum with a pair of horn-like praeopercular organs on posterior area. Seventh to ninth tergites with a crest-like structure on posterior area. Anal segment almost as long as eighth tergum, longer than ninth tergum, with a small emargination on posterior margin. Subgenital plate scoop-shaped, posterior margin rounded and reaching posterior margin of ninth tergum. Cerci small and apices rounded. Legs slender and long. Forelegs and hindlegs unarmed. Midlegs lost. Profemora and metafemora shorter than corresponding tibiae. Profemora distinctly

curved basally. Anteroventral and posteroventral carinae of profemora and metafemora with small spines near apices.

**Measurements:** See Table 1.

**Distribution:** China (Guangdong and Hong Kong).

**Notes:** The male is unknown. The midlegs of the female specimen are lost.

### CONCLUSION

In this study, *Neososibia brevispina* Chen & He, 2000 [Guangdong] is reported for the first time from Hong Kong. *N. brevispina* is similar to *N. guizhouensis* Chen & Ran, 2002 [Guizhou], but can be separated by small granules on the lateral margins of the mesonotum in the female. This species is previously known only from the type-locality at Fengkai, northwestern Guangdong. The segregated distribution of this species indicates the potential existence of populations in northeastern, central and southern Guangdong.

### ACKNOWLEDGMENTS

I wish to deeply thank Graham Reels, UK for proofreading the manuscript and the Museum of Biology, Sun Yat-Sen University, Guangzhou, Guangdong, China (SYSBM) for giving access to the corresponding collection.

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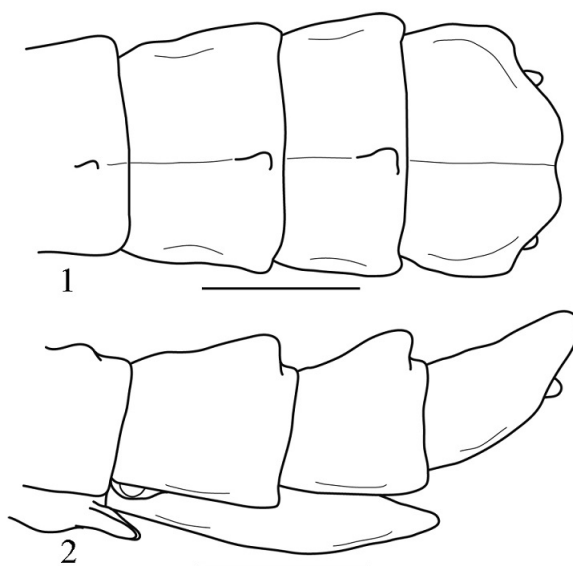
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## TABLE &amp; FIGURES

|                | Female |
|----------------|--------|
| Body           | 117.0  |
| Head           | 7.0    |
| Antennae       | 76.0   |
| Pronotum       | 6.0    |
| Mesonotum      | 28.0   |
| Metanotum      | 12.0   |
| Median segment | 5.5    |
| Profemur       | 29.0   |
| Mesofemur      | lost   |
| Metafemur      | 24.0   |
| Protibia       | 32.0   |
| Mesotibia      | lost   |
| Metatibia      | 30.0   |

**Table 1.** Measurements of *Neososibia brevispina* Chen & He, 2000 (mm)



**Figures 1-2.** *Neososibia brevispina* Chen & He, 2000 [scale bars 5 mm] (Drawings by author). 1. Female, end of abdomen, dorsal view. 2. Female, end of abdomen, lateral view



**Figure 3.** Habitus of female *Neososibia brevispina* Chen & He, 2000 [scale bar 5 mm] (Photo by author).

