

Identification and notes on Hong Kong Carabidae 1. The subfamily Panagaeinae Bonelli, 1810

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ABSTRACT

A key to all species of Panagaeinae recorded from Hong Kong is given. Where possible, the key includes all species recorded from or likely to occur in neighbouring Guangdong Province.

Key words: Ground Beetles, Carabidae, Panagaeinae, Hong Kong, China

INTRODUCTION

Since the publication of the Catalogue and Bibliography of the Hong Kong Carabidae (Aston, 2016), I have received several requests for identification guides. This is the first in a series of papers on the identification of Hong Kong Carabidae. Where possible, genera and species occurring in neighbouring Guangdong province will be included.

METHODS

For methodology see Aston (2016).

RESULTS & DISCUSSION

Species of this subfamily are quite distinctive in having the apical joint of the maxillary palps attached excentrically to penultimate joint (Fig. 1); neck constricted; eyes prominent and upper surface punctate and pubescent.

Since the publication of Hong Kong Carabidae catalogue, Fedorenko (2015) has moved *Dischissus notulatus* Fabricius, 1801 to the genus *Adischissus* Fedorenko, 2015. In the same publication, the genitalia illustration clearly shows the local Hong Kong taxa belong to the subfamily *A. notulatus sumatranus* (Dohrn, 1891).

Other than the biological notes given in Aston (2016), not much is known of the life history of this group in Hong Kong, though a pupa (Fig. 2) was found by the author on 7 May 2017 under a stone, at the edge of a raised area of gravel and fresh water marsh with *Chlaenius hamifer* Chaudoir, 1856, in Pui O on Lantau. It emerged into adult by 6 pm following day.

**Key to the species of Panagaeinae occurring in
Hong Kong and Guangdong
[modified from Häckel and Kirschenhofer, 2014a,
2014b]]**

1. Elytra immaculate [black or blue]. **2**
- Elytra black with two yellow maculata on each elytron. **3**
2. Black species with yellow pubescence; appendages pale; antennae unicolorous red. Protarsomere 1 expanded in male only. *Peronomerus* Schaum, 1854 ~ single species *Peronomerus fumatus* Schaum, 1854 (see figure 9)
- Blue species, basal antennomere glabrous, red. Legs red. Protarsomere 1 same in both sexes. *Trichisia* Motschulsky, 1865 ~ single species *Trichisia cyanea* (Schaum, 1854) (see figure 4)
3. Small species. less than 8mm long. Protarsi of males slightly wider than in females, but all tarsomeres lack ventral brushes of setae. *Microchemus* Strand, 1936 [should occur in Guangdong, but not yet recorded in Hong Kong] ~ single species *Microchemus flavopilosus* (LaFerte-Senectere, 1851) (see figure 5)
- Size variable, but all tarsi with ventral brushes of setae. **4**
4. Lateral border of pronotum black and evenly rounded [Hong Kong species]. Tarsomere 4 not split more than basal three or split less than one-half tarsomere length as in figure 3. **5** *Craspedophorus* Hope, 1838
- Lateral border of pronotum yellow or pronotum angulate at widest point and basal half sinuate [Hong Kong species]. Tarsomere 4 split more than basal three and split exceeds one-half tarsomere length. **7**
5. Large species, length > 16mm. *Craspedophorus mandarinus* (Schaum, 1853) (see figure 6)
- medium sized species, length < 13mm. **6**
6. Penultimate protarsomere cleft more than others (similarly to *Dischissus*, but cleft does not exceed half of tarsomere length). Pronotum oval, widest at or immediately behind midlength, with lateral margins bordered in crescent fashion and internally delimited by a furrow that is deepest at midlength, where lateral rim is most elevated. *Craspedophorus sapaensis guangdongensis* Häckel & Kirschenhofer, 2014b (see figure 7)
- Penultimate protarsomere of shape identical with first and third protarsomeres. *Craspedophorus philippinus* Jedlicka, 1939 [I have included this species in the key as Baehr (2003) lists it as occurring in Guangdong, though Häckel and Kirschenhofer (2014b) question whether these records belong to this species]

7. Large species length 16-18mm.
 . *Dischissus* Bates, 1873 ~ single species
Dischissus mirandus Bates, 1873 [*Dischissus*
tsengjialiae Sustek, 1996 as occurring in
 Hong Kong, though Häckel and Kirschenhofer
 (2014a) synonymized it with this species]
 - smaller species length 9mm. *Adischissus*
 Fedorenko, 2015 ~ single species *Adischissus*
notulatus sumatranus (Dohrn, 1891) (see figure 8)

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FIGURES

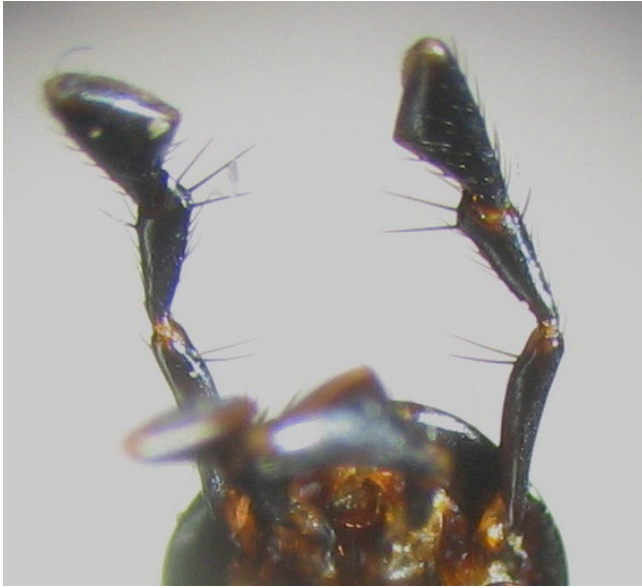


Figure 1. Maxillary palps of *Craspedophorus mandarinus* (Schaum, 1853) showing the apical joint attached excentrically to penultimate joint (Photo by author).



Figure 2. Pupa of *Craspedophorus mandarinus* (Schaum, 1853) (Photo by author).



Figure 3. Protarsi of *Craspedophorus sapaensis guangdongensis* Häckel & Kirschenhofer, 2014b (Photo by author).

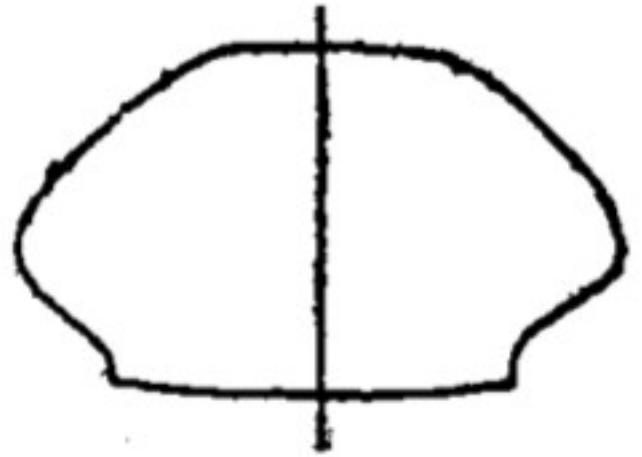


Figure 4. Pronotum of *Trichisia cyanea* (Schaum, 1854) after Jedlička (1965).

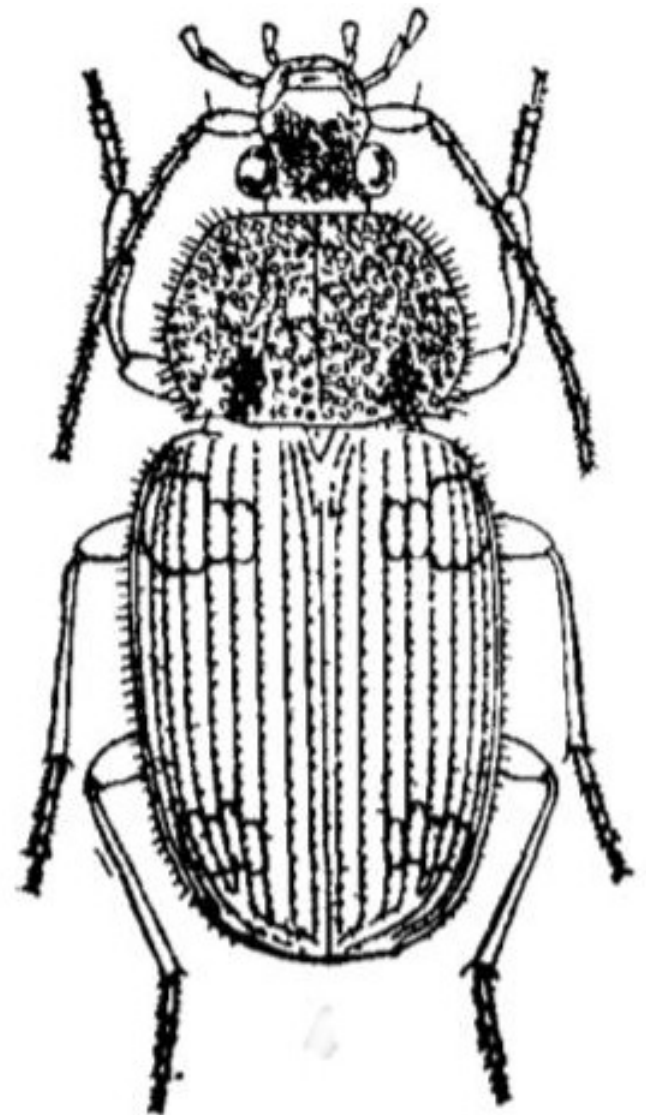


Figure 5. *Microschemus flavopilosus* (LaFerte-Seneclere, 1851) after Jedlička (1965).



Figure 6. *Craspedophorus mandarinus* (Schaum, 1853) (Photo by author).



Figure 7. *Craspedophorus sapaensis guangdongensis* Häckel & Kirschenhofer, 2014 (Photo by author).



Figure 8. *Adischissus notulatus sumatranus* (Dohrn, 1891) (Photo by author).



Figure 9. *Peronomerus fumatus* Schaum, 1854 (Photo by author).