

Chrysomelidae of Hong Kong Part 3

Subfamily Galerucinae

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ABSTRACT

This is the third part of a series of papers on the Chrysomelidae occurring in Hong Kong. The current paper deals with the large subfamily Galerucinae. Thirty-seven species are listed, all of which are covered by the keys.

Key words:

Chrysomelidae, Galerucinae, Coleoptera, Hong Kong.

INTRODUCTION

The Galerucinae is the most frequently encountered and speciose subfamily of the Chrysomelidae, or leaf beetles as they are commonly known. Members of the subfamily are characterised by having the mouth placed anteriorly; antennae not widely separated at the base, generally closely approximate; elytra more or less soft in texture; posterior femora not usually thickened, or if thickened, not significantly more so than in the two anterior pairs of legs.

In some species of Galerucinae, the male shows variously enlarged and modified segments of the antennae. When this occurs the basal segments below the enlargement are proportionally shorter and stouter as compared to the female. The genera *Taumacera* and *Agetocera* are examples of this in Hong Kong. Similarly, enlargement occurs on the first tarsal segment of the anterior tarsi in some Hong Kong species of the genus *Mimastra*.

METHODS

As in Part 2 of this series of articles (Aston 2009), the keys have been built on and modified from Gressitt and Kimoto (1963a and 1963b), and are best used for fresh specimens, though older specimens should pose no problem for more experienced users. Note that colours do generally become darker in older specimens. It is very likely that many more species will be discovered in Hong Kong, but most or all of our commonly occurring species should be adequately covered in the keys.

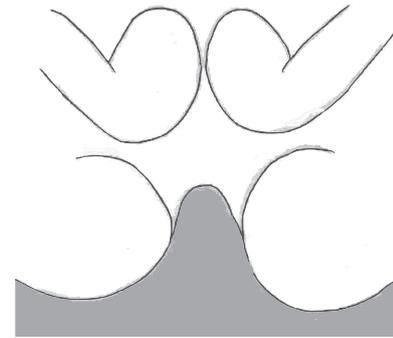
In the systematic section, for each species are given the length and description. Host plant information, if known, is generally taken from existing literature on south China, and is only listed if the species of plant is included in the *Agriculture, Fisheries and Conservation Department Bulletin 1 (revised) Checklist of Hong Kong Plants 2004*. The period when adults can be seen in Hong Kong is also given, mostly from personal notes of the author; also for south China, as indicated by literature records. World distribution is given for each species.

THE KEYS

Key to tribes of *Galerucinae*

1. Mesosternum free, horizontal or inclined, not covered by metasternum. Anterior of mesosternum meeting posterior of the prosternum. 2
 - Mesosternum largely covered by an anterior process of the metasternum as in sketch (right) of the underside of *Gallerucida singularis*. Tribe Gallerucidini

2. Occiput and pronotum deeply punctured; antennal insertions generally close, at level of anterior margins of eyes or further anterior (as in photo of the head and pronotum of *Pyrrhalta kwangtungensis* right). Last abdominal sternite of male with a triangular or rounded depression with posterior border often emarginate, but never tri-lobed Tribe Galerucini
 - Occiput and pronotum not heavily punctured, antennal insertions generally separated, situated near, but behind, anterior borders of eyes, but when weakly separated placed further forward; last sternite of male 3-lobed, with medium lobe always distinct Tribe Luperini



Gallerucida singularis - shaded area - anterior of mesosternum forming a process covering the posterior of the prosternum (centre). Figure Paul Aston



Gallerucidini

This tribe is easily identified by the mesosternum projecting forward through the mid coxae and covering part or most of the metasternum. Single genus and species in Hong Kong.

01. *Gallerucida singularis* Harold, 1880

Length 7-8.5mm. Elytra variable in colour from pale to reddish with a purplish sheen and generally with the humeral and apical angles yellowish. The latter with usually two, occasionally three black spots. Hong Kong specimens have additional spots on the humeral angles. Underparts dark brown. Antennae segment 2 is the shortest, 3 slightly longer and 4 twice as long as 3. This species was first recorded in Hong Kong by Hadden in 1932 (Bishop Museum).

Host: Japanese Smart-weed *Polygonum japonicum* Meisn.

Imago: March–December.

Distribution: Himalayas, northern Vietnam, China (Guangdong, Fujian, Sichuan).

Note: Gressitt and Kimoto (1963a) treated *Gallerucida gebieni* (Weise), as a synonym of *G. singularis*. However Kimoto (1967) retracted this, and recorded his specimens from Hong Kong as *gebieni*, which he subsequently moved to the genus *Leptarthra*. In a more recent publication (Kimoto, 1989), he refers to these specimens as *G. singularis*, which I have followed here, mainly because the anterior process of the metasternum is not a character of the genus *Leptarthra*.



Pale form



Darker purplish form



Mesosternum largely covered by an anterior process of the metasternum is diagnostic of this tribe.

Galerucini

The rough texture of the pronotum is indicative of this tribe; for other diagnostic features see the Key to Tribes of *Galerucinae* above. Six species in three genera have been recorded in Hong Kong.

Key to species of Galerucini

- 1. Primary setigerous pore on anterior part of lateral margin of pronotum and not actually on the corner, as in other genera in this tribe. *Apophyllia flavovirens*
 – Primary setigerous pore on anterior corner of pronotum 2
- 2. Disc of pronotum with a large glabrous space in the middle *Galerucella grisescens*
 – Disc of pronotum entirely covered by hairs, but in some cases anterior and lateral margins glabrous 3
- 3. Elytron reddish brown with all margins black, though this is sometimes difficult to see in the centre of the anterior border. Pronotum with three dark spots. Length 3.7-4.5mm *Pyrrhalta nigromarginata*
 – Without dark margins to the elytra 4
- 4. Antenna almost ½ length of body; pronotum and elytron sparsely covered with erect hairs; dorsum reddish brown with middle of vertex, three spots on pronotum, scutellum (except reddish apical area), and humeri, blackish; length 6-7mm. *Pyrrhalta maculicollis*
 – not as above 5
- 5. Length 6.5-7.5mm; elytral epipleuron not always distinct in apical third or half. Yellowish brown or brown; pronotum with a black spot near side; apical end of femora and bases of tibiae black *Pyrrhalta kwangtungensis*
 – Length 3.5-3.8mm; antennae blackish with bases of basal segments yellowish; anterior border of pronotum glabrous; apex of scutellum truncated, at apex testaceous; vertex sometimes black at middle; elytron testaceous usually with humeri black; meso- and metathorax and in some cases abdominal segments 1-3 also blackish *Pyrrhalta pusilla*

02. *Apophyllia flavovirens* (Fairmaire, 1878)

Length 4.5-5.8mm. Pronotum entirely yellowish brown (much darker in old specimens); elytra green; eye large, gena narrower than half transverse diameter of eye; abdomen entirely black. The genus is unusual in having distinct sexual dimorphism in the structure of claws, which are bifid in males and appendiculate in females.



This species was first recorded in Hong Kong by Thompson (California Academy of Science) in 1909.

Host: common on several local grass species and has been recorded as a pest on Maize *Zea mays* Lin.

Imago: March–October.

Distribution: Korea and China (Fujian, Anhui, Zhejiang, Hebei, Hubei, Sichuan, southeastern Tibet, Hainan and Guangdong).

03. *Galerucella grisescens* Joannis, 1866

Length 3.7-5.5mm. Orange or dirty brown (darker orange in older specimens) with the following black or piceous: eyes, scutellum, antennae and parts of the legs. The posterior point of the scutellum often has a notch in the middle. Sutural angle of elytron obtusely rounded; antennal segments 7-10 each two times as long as broad;



glabrous discal area of pronotum strongly widened anteriorly, reaching anterior angles. This species was first recorded in Hong Kong by Thompson (California Academy of Science) in 1909.

Host: *Polygonum* spp. and *Rumex* spp.

Imago: March–October.

Distribution: Huge range from Europe, Siberia, throughout China to Japan, Korea, Taiwan and Vietnam.

04. *Pyrrhalta kwangtungensis* Gressitt & Kimoto, 1963

Length 6.5-7.5mm. Dirty yellow (or ochraceous in older specimens) with black eyes and a black dot on both sides of the pronotum. Legs yellow (ochraceous in older specimens) with apices of femora and extreme bases of tibiae pitch black. This species is endemic to Guangdong province and Hong Kong. A paratype of this species was taken from Hong Kong in 1909. It is one of the earliest Galerucinae species to emerge, adults having been recorded as early as 16 January, and is common by February or March; scarce after May.



Imago: January-August.

Distribution: China (Guangdong).

05. *Pyrrhalta nigromarginata* (Jacoby, 1885)

Length 3.7-4.5mm. Oblong, subparallel-sided; yellowish brown; middle of vertex, scutellum and all margins of elytron blackish, metathorax and three spots on pronotum much darker than ground colour. This is a rare species, the type originated from Japan (but has since been unrecorded there), one record from Hainan and three records at Tai Po Kau, Hong Kong, the first being reported by Kimoto 1967.



Imago: March–April.

Distribution: Japan and China (Hainan).



06. *Pyrrhalta maculicollis* Motschulsky, 1853

Length 6-7mm. Antenna almost half length of body; pronotum and elytron sparsely covered with erect hairs; dorsum reddish brown; with middle of vertex, three spots on pronotum, scutellum (except reddish apical area), and humeri, blackish. This species is listed as occurring in Hong Kong by Ogloblin (1936).

Host: *Ulmus* spp. In northeastern China this species is classified as a pest on elms.

Imago: May–August.

Distribution: SE Siberia, Japan and China (Liaoning, Hubei, Henan, Jiangsu, Zhejiang, Fujian, Jianxi and Guangdong).

07. *Pyrrhalta pusilla* Duftschmidt, 1825

Length 3.5–3.8mm. Antennae blackish with bases of basal segments yellowish; anterior border of pronotum glabrous; apex of scutellum truncated at apex; testaceous; vertex sometimes black at middle; elytron testaceous usually with humeri black; meso- and metathorax and in some cases abdominal segments 1-3 also blackish. This species was recorded as occurring in Hong Kong by Liu (1935).

Imago: September.

Distribution: Europe, Russia and China (S. Shanxi, Shandong, Jilin and Liaoning).

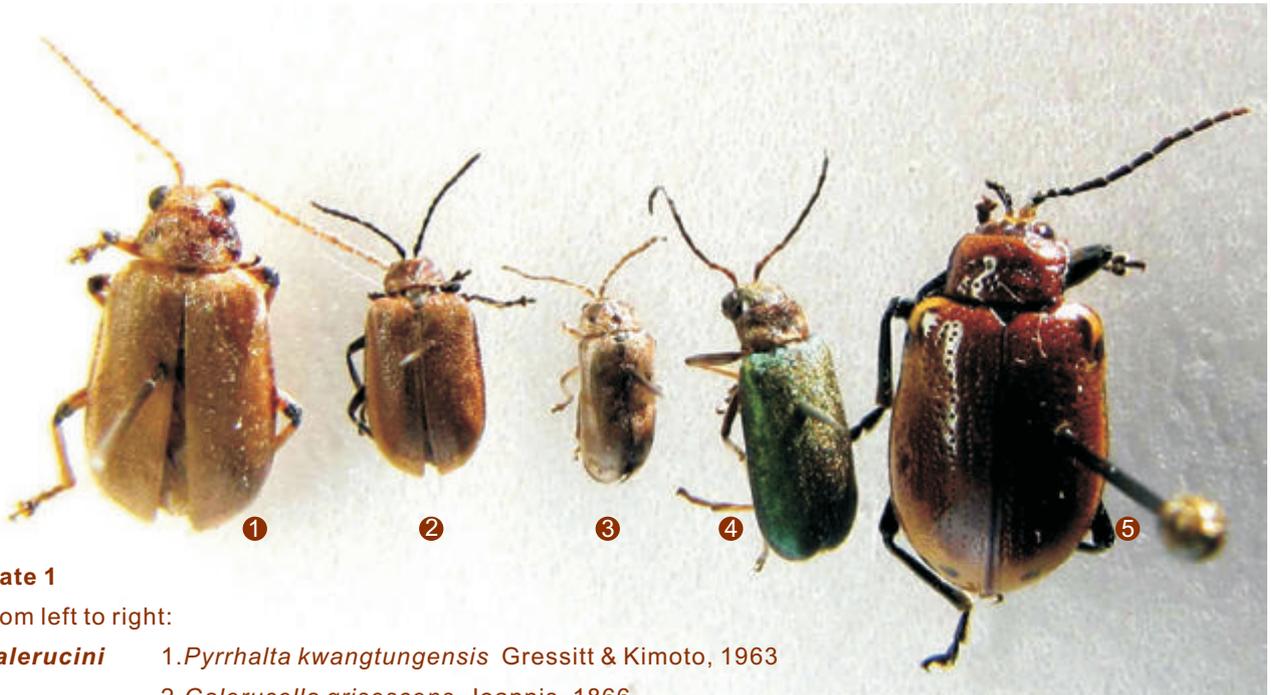


Plate 1

From left to right:

- Galerucini**
1. *Pyrrhalta kwangtungensis* Gressitt & Kimoto, 1963
 2. *Galerucella grisescens* Joannis, 1866
 3. *Pyrrhalta nigromarginata* Jakoby, 1885
 4. *Apophyllia flavovirens* Fairmaire, 1878
- Gallerucidini**
5. *Gallerucida singularis* Harold, 1880

Luperini

This is by far the largest tribe, in China, containing roughly four times the number of species as the two previous tribes combined. This tribe has been divided into four groups.

Key to species of Luperini

- 1. Tarsal claws bifid. Luperini Group 1
 - Tarsal claws not bifid 2
- 2. Anterior coxal cavities open behind or partly open. 3
 - Anterior coxal cavities closed behind Luperini Group 4
- 3. Posterior tibia unspined Luperini Group 2
 - Mid and posterior tibia with spines Luperini Group 3

Key to the species in Luperini Group 1

- 1. Pronotum without a transverse depression; disc sub-evenly convex. Body broadly ovate; elytral epipleuron wide, inferior, recurved basally. 2
 - Pronotum with a transverse depression, sometimes divided in the middle. 3
- 2. Elytral disc almost entirely metallic blue or green. *Oides bowringi*
 - Elytron with five distinct subround spots, each smaller than spaces between spots, usually 2:2:1; elytral epipleuron at middle quarter as wide as disc; pronotum unspotted *Oides decempunctata*
- 3. Tibiae distinctly spined apically. 4
 - Tibiae not distinctly spined apically; elytral epipleuron narrow but distinct almost to the apex *Hoplasoma unicolor*
- 4. Elytral epipleuron strongly narrowed behind basal third, abbreviated behind middle *Aulacophora*
 - Elytral epipleuron gradually narrowed posteriorly *Agetocera mirabilis*

08. *Oides bowringi* (Baly, 1863)

Length 12.5-15mm. In the male one or both of these characters may be present: (1) the first segment of the tarsi of the front and middle legs is more dilated than the corresponding segment on the hind legs; (2) the apex of the last visible abdominal sternite is strongly and obliquely cut away on each side. In both sexes the elytral disc is almost entirely covered with a broad metallic blue or green stripe extending most of elytral length, though the width of the stripe does appear to be quite variable. This species was described from Hong Kong.

Host: species of *Schisandraceae*.

Imago: June–September.

Distribution: Japan, Korea and China (Guangdong, Fujian, Jianxi, Hubei, Sichuan and southeastern Tibet).



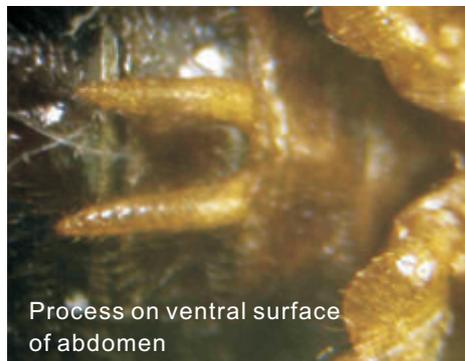
09. *Oides decempunctata* (Billberg, 1808)

Length 10-12mm. Rich orange. Pronotum unspotted. Each elytron with five distinct subrounded spots, each smaller than spaces between. Elytral epipleuron at middle quarter as wide as disc. Hoffman (1932) Lingnan Sci. Jour, 11 page 565, gave notes on the life history of this species. This species was first listed as occurring in Hong Kong by Redtenbacher in 1868.

Host: *Vitis vinifera* L.

Imago: May-October.

Distribution: Korea China (as far west as Sichuan).

10. *Hoplasoma unicolor* (Illiger, 1800)

Length 7-8.5mm. This genus is characterized by the prothorax being much narrower than the base of the elytra. General colour shining yellow brown. The colour of the abdomen and other parts of the underside varies from black to dark brown or piceous. Prothorax with side slightly sinuate and with basal and apical angles prominent; pronotal disc with transverse depression barely reaching forward of middle; elytron sub-regularly punctured and without carinae on disc. Males of this species possess two processes extending from the posterior margin of the second abdominal segment (centre photo above).

Host: *Clerodendrom inerme* (L).

Imago: June–September.

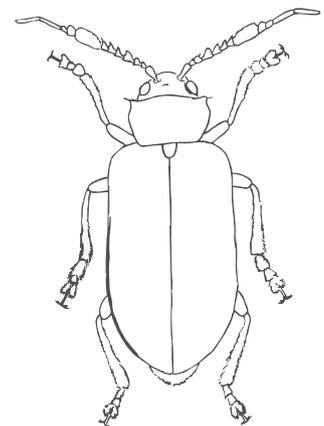
Distribution: India, Burma, Malaysia, Philippines, Vietnam and China (Hainan, Jianxi and Guangdong).

11. *Agetocera mirabilis* (Hope, 1831)

Length 13.5-16mm. Large species. General colour bright yellow, yellow brown or dark brown. The elytra deep violet or purplish blue. Antennae pale on basal half, with segment 4 deformed, somewhat sinuate. Male: antennae segment 8 very large, segment 9 very broad basally and bearing a large flat membrane-like surface. The last visible sternite is divided into three lobes, the medium being depressed in the middle. Female: The last visible sternite is uniformly and widely emarginate at the apex. The type of *Aplosomyx heterocera* Redtenbacher, 1868, a synonym of this species, was taken in Hong Kong.

Imago: June-September.

Distribution: Nepal, India, Burma, Laos, Vietnam and China (Hainan and Zhejiang).



Agetocera mirabilis
after Maulik 1935

Key to species of *Aulacophora*

- 1. Elytron black, or at least black on entire basal half. 2
 - Elytron entirely pale; antennal scape broadened and humerus covered with erect hairs in male; scutellum not black *Aulacophora indica*

- 2. Antenna segments 3-5 of male strongly broadened. Antennal segment 3 longer than broad, flat and subtriangular; antennal segment 4 broader than long, quite flat, produced endo-apically. Medium ridge of frontoclypeus of female much shorter than scape. *Aulacophora palliata*
 - Antenna of male not specially modified, but sometimes rather stout 3

- 3. Male antennae with segments fairly stout, but not otherwise modified; head entirely pale; elytron slightly uneven, not very shiny, with punctures mostly one third to half as wide as interspaces. *Aulacophora lewisii*
 - Antennae of male rather slender. Legs almost entirely black; apex of last abdominal sternite of female nearly transverse *Aulacophora nigripennis*

12. *Aulacophora indica* (Gmelin, 1790)

Length 6.4-7.5mm. Dorsal surface entirely pale, except for eyes which are black. In male antenna scape broadened but inter-antennal area not modified. Humerus covered with erect hairs in male. *A. femoralis* and *A. similis* are synonyms of this species. This is a wide ranging species, first recorded in Hong Kong by Muir in 1906.

Host: Cucurbitaceae.

Imago: April-October.



Distribution: E Siberia, Vietnam, Korea, Japan, Philippines, SE Asia and China (Hebei, Shaanxi, Shandong, Jiangsu, Zhejiang, Fujian, Guangdong, Jiangxi, Hubei, Sichuan, southeastern Tibet, Guizhou, Yunnan and Hainan).

13. *Aulacophora palliata* (Schaller, 1783)



Male



Male antennae



Female antennae

Length 6.5mm. Elytra and eyes black, rest of body orange (bright brown in older specimens). Best distinguished from *A. lewisii* by the male antennae, which are only very slightly modified in that species. Also in *A. lewisii* the head, pronotum and underparts are testaceous to brownish yellow in colour. Male: (1) head with a transverse ridge on each side of the vertical area; (2) antennae segments 1 and 3-5 modified (see photo); (3) last visible abdominal sternite tri-lobed. First recorded in Hong Kong by Kimoto 1967.

Imago: May-July.

Distribution: India, Vietnam and China (Hainan, Guangdong and Yunnan).

14. *Aulacophora lewisi* Baly, 1886

Length 5.3-6mm. Head, pronotum and underparts are testaceous to brownish yellow in colour. Male: (1) the last visible sternite is tri-lobed (2) the third, fourth and fifth segments of the antennae are very slightly thickened, more so than in the female. The type specimen is from Hong Kong Island.

Host: Cucurbitaceae.

Imago: March-December.

Distribution: Japan, India, SE Asia and China (Sichuan, Jiangxi, Fujian and Guangdong)

15. *Aulacophora nigripennis* Motschulsky, 1857.

Length 5.6-6.3mm. Distinguished from other similar species by almost totally black legs. In the male, the last visible sternite is tri-lobed and antennal segments 3-5 are somewhat thicker than in the female.

Host: *Glycine max* (Lin.)

Imago: March-October.

Distribution: E Siberia, Korea, Japan, Vietnam and China (Taiwan, Hainan, Sichuan, Jiangxi, Anhui, Fujian and Guangdong).



Plate 2 Luperini Group 1 .



From left to right: 1. *Oides bowringi* Baly

2. *Oides decempunctata* Billberg

3. *Hoplasoma unicolor* (Illiger)

4. *Aulacophora indica* (Gmelin)

5. *Aulacophora palliata* (Schaller)

6. *Aulacophora lewisi* Baly

7. *Aulacophora nigripennis* Motschulsky

Key to the species in Luperini Group 2

1. Anterior and posterior borders of pronotum unmarginated, though posterior border with two tubercles either side of centre; prothorax no broader than long; body slender *Cerophysella basalis*
– posterior border of pronotum marginated 2

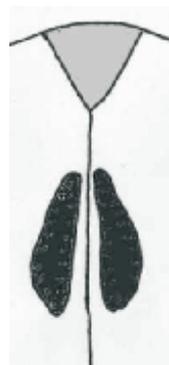
2. Anterior border of prothorax unmarginated. Pronotal disk with distinct impressions 3
– Anterior border of prothorax marginated, elytra more or less glabrous. Pronotum with distinct depressions. Antennal segments with with close pubescence beyond segment 4, which is longer than 2+3. Mesosternum narrow and not connected with metasternum. Elytral epipleuron wide basally and narrowing in basal third *Mimastra* sp.

3. Elytra non-carinate. Dorsum glabrous; body elongate-oval, widened posteriorly; occiput smooth; penultimate segment of maxillary palp moderately thickened; antennae slightly more than half as long as body; antennal segments 7-8 enlarged in male. Length 5-5.6mm. *Taumacera biplagiata*
– Elytra longitudinally carinate behind humerus, generally with a groove separating two carinae posteriorly; gena short; eye very large in male *Hoplosomoides* sp.



16. *Cerophysella basalis* (Baly, 1874)

Length 5–6mm. This is a highly variable species, but the two tubercles on the otherwise unmarginated posterior border of the pronotum and the male having two depressions either side of the elytral suture, just behind the scutellum (sketch right with scutellum grey and depressions black) make this species quite distinctive. Several forms are known: (1) basal part of elytra black, elytra otherwise reddish, as in photo on the left above; this seems to be the commonest form in Hong Kong and very similar to the syntype in Harvard University; (2) elytra entirely black, as in centre photo above; (3) elytra black with a yellowish area in the middle; (4) entire elytron yellowish or reddish. Almost always found on grass, usually at dawn after the dew has formed. It can be found from sea level to over 900m altitude. Although fairly common, this is the first record for Hong Kong.



Imago: April–May.

Distribution: Japan, Vietnam and China (Guangdong, Hainan and Jiangxi).



17. *Taumacera biplagiata* (Duvivier, 1885)

Length 5-5.6mm. In addition to the sexual variations in the antennae structure there is also considerable colour variation, the thorax may be black or reddish brown and the elytron sometimes has a reddish brown spot. However, in Hong Kong most specimens are similar to the male (left) and female (right) pictured above. This species is invariably found on flowers of the open hillsides and scrubby forest. This species was originally described from Hong Kong.

Imago: April–May.

Distribution: China (Sichuan, Fujian, Guangdong and Hainan).

Key to species of Hoplosomoides

1. Elytral carinae weak. Elytra pale *H. annamitus*
 – Elytral carinae quite sharp and distinct. Elytra black *H. costata*

18. *Haplosomoides annamitus* Allard, 1888

Length 6mm. Prothorax weakly trapeziform, venter generally pitch-coloured. Dorsum dull testaceous. Prothorax slightly emarginate (obtusely) at middle of anterior margin. Although not particularly brightly coloured this species is quite distinctive with the shining head and pronotum and large, almost circular black eyes. In older publications this species is known as *Haplosomoides egena* Weise. This is a common species found from sea level to over 900m in altitude. First recorded in Hong Kong by Kimoto (1967).



Imago: April–June.

Distribution: Vietnam, India and China (Zhejiang, Guangdong, Fujian, Taiwan, Sichuan and southeastern Tibet).

19. *Hoplosomoides costata* (Baly, 1878)

Length 6–7mm. Elytron entirely black. Head, pronotum and legs bright orange fading to yellowish brown in older specimens. The costa on the elytra of this species is much more noticeable than in *H. annamitus*, but as with that species the large black eyes are a distinctive feature.



Imago: single Hong Kong record 5 July 2008 Pak Kung Au, Lantau, but in China April – July.

Host: in Japan has been recorded on a species of *Clerodendrum*.

Distribution: Japan, Vietnam and China (Taiwan, Hainan, Zhejiang, Fujian, Guizhou, Sichuan, Guangdong and southeastern Tibet).

Key to species of *Mimastra*

- 1. Dorsal surface entirely brownish, except pronotum which may have indistinct dark markings. Third antennal segment nearly 1.5x times as long as second, and fourth more than twice as long as third. Pronotum with lateral margin rounded, and with a shallow pair of lateral depressions in addition to an anterior and a posterior median depression *M. soreli*
 - Dorsal surface with blackish or blueish markings 2

- 2. Prothorax with corners somewhat rounded. Elytron with apical third greenish or bluish, sometimes with a fine line extending forwards. Length 7.5–9mm *M. unicitarsis*
 - Prothorax with corners fairly angular. Elytron with at least apical two fifths steel blue to purplish. First tarsal segment of male anterior leg enlarged and rounded. Length 9–10 mm *M. cyanura*

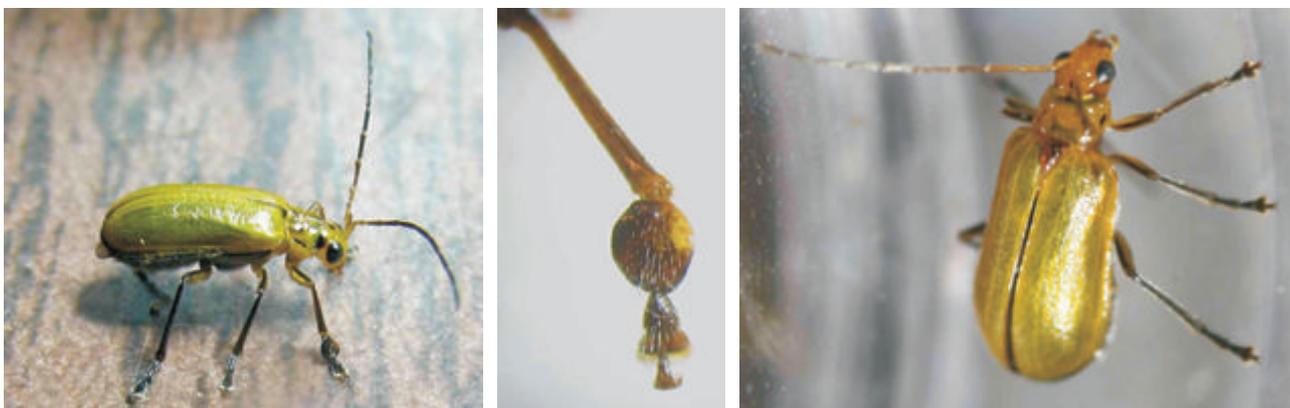
20. *Mimastra cyanura* (Hope, 1831)

Length 9–10mm. This species is similar to *M. unicitarsis* in general colouration, but unlike that species the corners of the prothorax are angular and the first tarsal segment of the anterior leg is rounded in a similar way to *M. soreli*. This is not a common species in Hong Kong and as far as I am aware has only been recorded with certainty by Kimoto in April and May 1965 (Kimoto 1967).

Imago: April–May (June in China).

Distribution: India and China (Fujian, Jiangxi, Guangdong, Hubei, Sichuan and southeastern Tibet).

21. *Mimastra soreli* Baly, 1878



Length 7.5-9mm. Pronotum 1.5x times as wide as long. In the male the first segment of the anterior tarsi is expanded and round (photo above left and centre). Female (above right) cannot be identified with certainty in Hong Kong unless with male, due to possible confusion with a locally recorded form of *M. unicitarsis* (see under that species for notes). This is the commonest species of *Mimasta* found in Hong Kong and can be frequently seen on various flowers in spring. First recorded in Hong Kong by Kimoto (1967).

Imago: March–June, though recorded to August in China.

Distribution: Thailand, Vietnam, China (Jiangsu, Zhejiang, Fujian, Guangdong and Sichuan).

22. *Mimastra unicitarsis* Laboissiere, 1940

Length 7.5–9mm.

This species has the anterior of the elytra with a metal blue colouration. However, Kimoto (1967) noted that the only specimen of this species he collected in Hong Kong was "Distinctly different from any other known form of *M. unicitarsis*,

in having elytra entirely brownish". First recorded in Hong Kong by Kimoto (1967).

Imago: April–June (to July in China).

Distribution: Myanmar, Thailand, Laos and China (Zhejiang, Fujian, Jiangxi, Guangdong and Yunnan).



From left to right: 1. *Cerophysella basalis* (normal form)
2. *C. basalis* (dark elytra form)
3. *Taumacera biplagiata* (female)
4. *T. biplagiata* (male)

5. *Haplosomoides annamitus*
6. *H. costata*
7. *Mimastra soreli* (male)
8. *M. unicitarsis* (male)

Key to the species in Luperini Group 3

- 1. First segment of posterior tarsus distinctly shorter than remainder combined. Elytral epipleuron distinct only before middle. Abdominal segments yellowish with a pair of black markings on each. Pronotum yellow with a row of large dark or black spots. Elytra dark or black. Length 7.5-8.5mm *Morphosphaera chrysomeloides*
 - First segment of posterior tarsus as long as, or longer than remainder combined. Dorsal surface glabrous or elytron sparsely covered with short hairs. Elytral epipleuron wide at base. Anterior border of pronotum unmarginated. 2

- 2. Anterior margin of labrum emarginate. Postantennal swellings widely separated by frons. Frons broad, depressed in middle, without a longitudinal interantennal ridge *Sinoluperus subcastatus*
 - Anterior margin of labrum entire; postantennal tubercles elongate, triangular and not widely separated by frons. Frons not depressed but with a longitudinal inter-antennal ridge. Setigerous pore set back one fifth to one sixth of length of pronotum from anterior angle *Medythia suturalis*

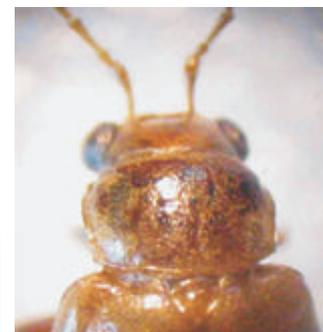
23. *Morphosphaera chrysomeloides* (Bates, 1866)

Length 7.5-8.5mm. Elytral epipleuron distinct only before middle. Abdominal segments yellowish with a pair of black markings on each. Pronotum yellow with a row of large dark or black spots. Elytra dark or black. In older publications this species is known as *Oides chrysomeloides*. Two specimens of this species were collected from Hong Kong by Stimpson prior to 1884 according to Duvivier (1884); possibly unrecorded since, other than from Taiwan, where quite common.

Distribution: China (south China? and Taiwan).

24. *Sinoluperus subcostatus* Gressitt & Kimoto, 1963

Length 5.5mm. A distinctive feature of this species is the very broad concave frons. Pale ochraceous and slightly reddish on parts of the elytra. Antennae thinly clothed with fairly short oblique pale hairs. Head and posterior of elytra with just a few sub-erect hairs. Collected in Hong Kong by T.K. Ho in 1940 (Gressitt & Kimoto, 1963a).



Imago: May (May–August in China).

Distribution: China (Jiangxi, Guangdong, Sichuan, Hainan and Zhejiang).

25. *Medythia suturalis suturalis* (Motschulsky, 1858)

Length 3.4-3.9mm. This very distinctive species is unlikely to be mistaken for any other species occurring locally. Distinguished from other subspecies by the black elytral stripe extending to the humerus. Named in older publications as *Paraluperodes suturalis* or *Luperodes suturalis*.

Host: *Glycine max* (Soybean).

Imago: May–October.

Distribution: Indonesia, Vietnam, Philippines, Japan and China (Hainan, Guangdong, Sichuan, Taiwan). Other subspecies found in northern China, Russia, Korea and Japan.



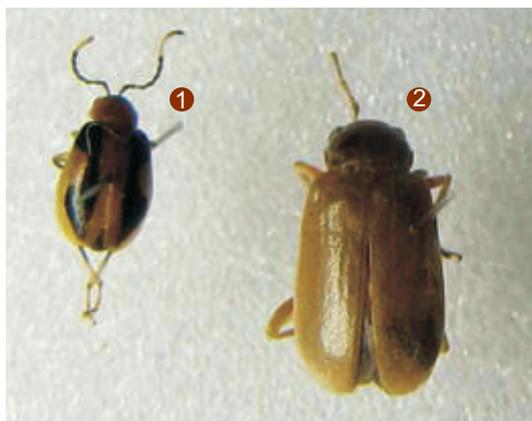


Plate 4 Luperini Group 3.

From left to right:

1. *Medythia suturalis suturalis*

2. *Sinoluperus subcastatus*

Key to species in Luperini Group 4

1. First segment of posterior tarsus distinctly longer than remainder combined. Tibia with a long spine at the apex .M .
soreli 2
– First segment of posterior tarsus usually shorter than or sometimes equal to the remainder combined (include here
Trichobalya bowringii which has the first segment of posterior tarsus longer than remainder, but only has a small
spine at apex to tibia) 3
2. Elytral epipleuron gradually narrowed behind, and wider at middle than half width in basal portion. Apex of elytron
not truncate but rounded *Sermyloides* sp.
– Elytral epipleuron suddenly narrowed at end of basal third and distinctly narrower at middle than half width in basal
portion *Monolepta* sp.
3. Basal border of pronotum not margined except near side. Posterior corner of of pronotum rounded and sub-obtuse.
Antennae robust, segments 2 and 3 subequal. Pronotum without a distinct fovea laterally
. *Sphenoraia nebulosa*
– Basal border of pronotum entirely margined 4
4. Pronotum with a pair of short longitudinal furrows which start from the basal margin
. *Sphenoraia nebulosa*
– Pronotum without longitudinal furrows. Posterior tibia with a single spine at apex 5
5. Pronotum without a distinct depression laterally. Antennae barely longer than half body length. Prosternum
narrow, but visible between coxae. Anterior border of pronotum strongly emarginate *Pseudoides tibialis*
– Pronotum with a distinct depression laterally. Each elytron with double rows of longitudinal punctures, with a short
scutellar row, interstices raised between double rows. 6
6. Dorsal surface of elytron thickly covered by hairs *Trichobalya bowringii*
– Elytra surface sparsely covered by hairs *Theopea smaragdina*

26. *Sermyloides* sp.

This is quite a distinctive genus with at least eight species previously being recorded in China, none of which matches this species. Length 5.4mm. Upper parts testaceous. The front of head has a deep frontal cavity with a central transverse ridge and on the



border of this frontal cavity, close to the eyes and antennal insertions is a hairy ridge. The above photos, of the only specimen of this species recorded in Hong Kong, were taken by Yiu Vor on 15 April 2007, at Yi Tung Shan.

Key to species of *Monolepta*

1. Dorsal surface of elytra with at least some black or piceous areas other than on the extreme basal margin 2
 - Other than on the extreme basal margin, no black or piceous areas on dorsal surface of elytra. 5

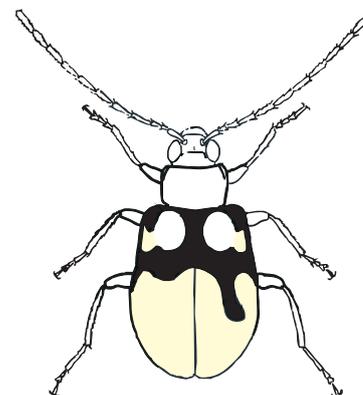
2. Elytron of male with a longitudinal cavity on outer part of disc. In female suture depressed behind scutellum, then slightly raised at end of basal ¼ and behind this a small shallow depression on suture. Elytron with 3 black bands and 2 pale bands. Length 4.5–5mm *M. cavipennis*
 - Not as above 3

3. Elytral ground colour orange with basal area (other than on lateral, basal or sutural margins) and discal spot in the apical area of elytra piceous *Monolepta* sp. 1
 - Not as above 4

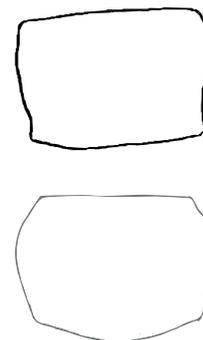
4. Elytra with black, yellow and gold markings as illustrated on right *M. hieroglyphica*
 - Ground colour of elytron black, with two yellowish markings (before and behind middle). Head, thorax and abdomen reddish brown *M. signata*

5. Ground colour of elytron pale reddish brown, with two yellowish markings (before and behind middle). Head, thorax and abdomen reddish brown *Monolepta* sp. 2
 - Ground colour yellow to yellow brown. 6

6. Pronotum subquadrate (sketch right) and the elytra sub-parallel-sided. Specimens yellowish brown in colour (much paler in life), except metathorax, lateral half of basal margin of elytra and basal half of interior margin of elytral epipleurae blackish. Length 3–3.8mm *M. hongkongense*
 - Pronotum distinctly wider anterior of centre (sketch right). Apical two thirds of elytral epipleuron narrow. Abdomen yellowish with meso- and metathorax slightly darker. No black or dark patches on elytra. Length 2.2–2.8mm *M. palliparva*

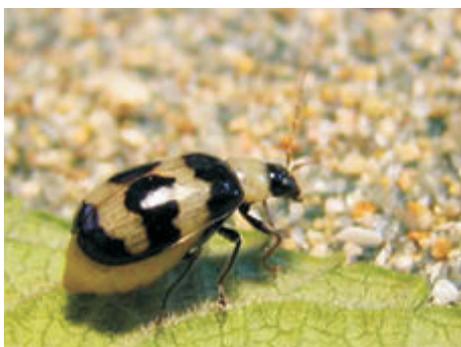


Above: *Monolepta hieroglyphica*



27. *Monolepta cavipennis* Baly, 1878

Length 4.5–5mm. This is quite a common and easily identified species. Elytron with three black bands and two pale bands. Male: photo above right with a longitudinal



cavity on outer part of disc. Female: photo above left with suture depressed behind scutellum, then slightly raised at end of basal quarter and behind this a small shallow depression on suture.

Imago: March–November.

Distribution: India, Thailand, Vietnam and China (Guangdong, Hubei, Sichuan).

28. *Monolepta* sp. 1

Length 4.5–5 mm. Elytral ground colour orange, with basal area (other than on lateral, basal or sutural margins) and discal spot in the apical area of elytra piceous. Much darker in older specimens. First three antennal segments orange, other segments almost black.

Imago: recorded in April–May on Lantau Island, Hong Kong.

29. *Monolepta hieroglyphica* (Motschulsky, 1858)

Length 3.5–4 mm. See sketch of this species in the key to the species of *Monolepta*. Basal margin and basal half of lateral and sutural margins, humerus and a transverse band, which is joined with lateral and sutural margins, black. In some cases transverse band not reaching lateral margin. Abdomen yellow brown. Metathorax black.

Imago: May–October in China.

Distribution: SE Asia and China (Jilin, Liaoning, Hubei, Sichuan, Jiangxi, Fujian, Guangdong, Shanxi, Henan, Zhejiang, Taiwan, Yunnan, Guizhou, Yunnan and Nei Mongol).

30. *Monolepta signata* Olivier, 1808

Length 3–3.8mm. Ground colour of elytron black with two yellowish markings (before and behind middle). Head, thorax and abdomen reddish brown in older specimens, much brighter in fresh specimens.

Imago: March–September.

Distribution: India, Burma, Thailand, Vietnam and China (Yunnan, Sichuan, Fujian, Guangdong, Guangxi and Hainan).

31. *Monolepta* sp. 2

Length 3.2–3.6mm. Specimens are slightly smaller than *M. signata* and have basal colour of the elytra a bright orange brown (less bright in dead specimens); other than that they are quite identical to that species. It is quite possible this may simply be a form of *M. signata*.

Imago: June–October.



32. *Monolepa hongkongense* Kimoto, 1967

Length 3–3.8mm. This species together with *M. palliparva* appears to be the commonest very small pale Galerucine in Hong Kong. They are both easily overlooked due to their inconspicuous colouration and tiny size. Yellowish brown in colour (much paler in live insects), except metathorax (photo above right), lateral half of basal margin of elytra (centre photo above) and basal half of interior margin of elytral epipleurae blackish. The pronotum of this species is subquadrate and the elytra subparallel-sided. This species was described from Hong Kong and to date has not been recorded elsewhere.

Imago: May–June.



33. *Monolepta palliparva* Gressitt & Kimoto, 1963

Length 2.2–2.8mm. Fresh individuals are much paler than older specimens. Antennal segment 1 slender, slightly arched; segment 2 swollen, twice as long as broad; 3 barely longer than 2. First three segments more or less the same colour as pronotum; antennae otherwise pitchy brown, apical segment slightly reddish. Unusually for any Chrysomelidae the individual to the right was circling about 5cm off the ground over bare earth, on which it landed well away from any plant. This species was first recorded in Hong Kong by Kimoto (1965).

Imago: May–October.

Distribution: China (Guizhou, Yunnan and Jiangxi).



34. *Sphenoraia nebulosa* (Gyllenhal, 1808)

Length 5.5–7 mm. Elytron entirely irregularly punctured. Dorsal surface reddish to yellowish brown with seven black spots; the pronotum pale with two black spots. Elytron can be blackish in some specimens. Antennae very robust. I am slightly uneasy placing this name with this species as it seems quite



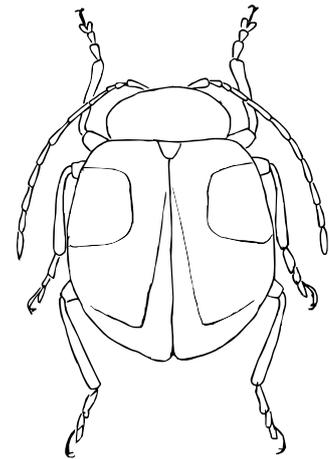
different to Maulik's (1935) description and the illustration of the type. However Kimoto (1989) illustrates this species. The species may be confused with the Chrysomelinae species *Gonioctena tredecimmaculata*.

Imago: March–September (commoner after July).

Distribution: India, Burma, Thailand, Laos, Vietnam and China (Hainan and Guangdong).

35. *Cassena tricolor* (Gressitt and Kimoto, 1963)

Length 5.5mm. Head, prothorax and scutellum reddish ochraceous. Antennae pitchy black, reddish on scape. Elytron pitchy black on basal two thirds except for a very large testaceous spot immediately behind the humerus as well as a reddish sutural stripe which widens posteriorly. Apical third of elytra testaceous. Holotype from Yuen Long, September 1940. Illustration right after Gressitt and Kimoto (1963).



[*Pseudoides tibialis* (Chen, 1942).]

Length over 5mm. This species is included as it is listed by Hua (2002) as occurring in Hong Kong, but there is no information on specimens. Dorsum entirely pale except extreme margins of elytra. Prothorax about three fifths as long as broad. Middle antennal segments about 4x as long as broad. Elytral punctures distinct.

Distribution: China (Fujian and Guangxi).

36. *Trichobalya bowringii* (Baly, 1890)

Length 5–8mm. Head and pronotum reddish brown. Pronotum nearly one and a quarter times as wide as long. Elytron violaceous to bluish black. The type of this species is from Hong Kong. Gressitt and Kimoto (1963a) give a rather confusing key to this species; however Baly's 1890 original description is clearer and Kimoto (1989) gives a good workable description.

Imago: March–October.

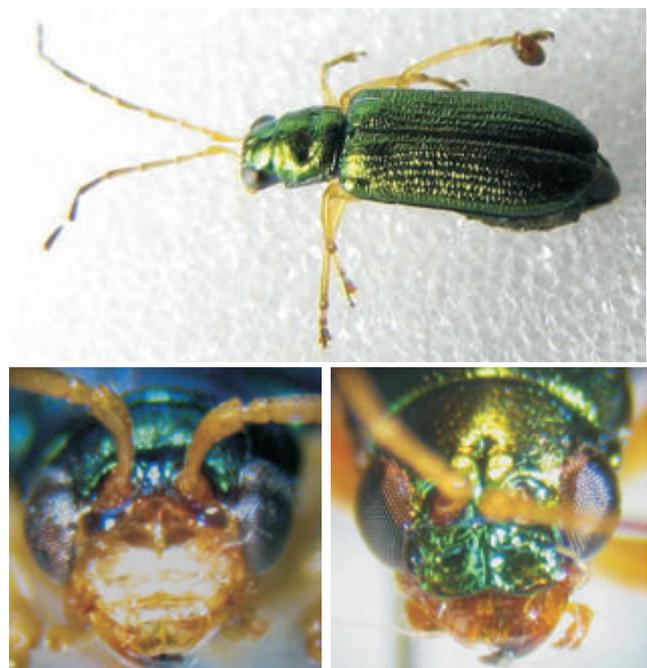
Distribution: Thailand, Laos, Vietnam and China (Yunnan, Guangdong and Hainan).

37. *Theopea smaragdina* Gressitt and Kimoto, 1963

Length 4.5–5.8mm. A golden green colour with blue reflections. The male is characterised by a deep excavation in the frons (photo centre above) whereas the female has most of the face green. Note *T. coerulea* is a similar species which may well occur in Hong Kong, it has the antennae pitch brown with the pronotum having a fairly deep rounded impression either side of the disk, whereas in *T. smaragdina* it is more transverse.

Imago: April–July.

Distribution: China (Hainan and Guangdong).





- From left to right: 1. *Sermyloides* sp.
2. *Monolepta cavipennis*
3. *Monolepta* sp 1
4. *Monolepta hieroglyphica*
5. *Monolepta signata*
6. *Monolepta* sp 2
7. *Monolepta hongkongense*
8. *Monolepta palliparva*
9. *Sphenoraia nebulosa*
10. *Trichobalya bowringii*
11. *Theopea smaragdina*

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