Readers of "Hong Kong Biodiversity" might be wondering why it has taken us so long to publish this issue. The reason lies in BSAP. You are probably aware that the Government launched Hong Kong's first Biodiversity Strategy and Action Plan (BSAP) in December 2016, setting the scene for conservation of biodiversity in the coming five years. While we have continued to collect ecological data and keep up with the changes related to species, especially in taxonomy and status, the team is also heavily engaged in compiling, coordinating and implementing the actions laid down in the BSAP.

One key action area of the BSAP is improving our knowledge on local biodiversity. This area covers initiatives from generating new information and consolidating existing data, to collaborating with partners and improving information-sharing. We will commission relevant studies on priority topics and also support research projects through relevant funding sources. To this end, we will develop a web-based information hub to provide biodiversity information in a more user-friendly manner. In the meantime, we will continue to publish the results of our surveys, studies and any findings that might be of interest to the wider conservation community, through “Hong Kong Biodiversity”. The BSAP marks a new page in the mainstreaming of biodiversity in Hong Kong. We need your continued support to keep up this momentum.

Jackie YIP
From the Editor

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Chief Editor : Jackie Y. Yip (yyip@afcd.gov.hk)
Article Editor : Ray L.H. So (ray_lh_so@afcd.gov.hk)

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Feature Article

Potamidid Snails in Hong Kong Mangroves

Nelson P.L. Wong and Terence P.T. Ng
Wetland Specialist Working Group

Introduction

For marine organisms, mangroves are a physically challenging habitat, characterized by acidic and anoxic soil, a three-dimensional structure of mangrove stands, and fluctuating salinity resulting from intermittent tidal inundation, evaporation in the tropical sun and heavy rainfall. Yet, in such a harsh environment across the central Indo-West Pacific region including Hong Kong, there lives a suite of small and often extremely abundant snails from the family Potamididae (Fig. 1). Most of the potamidid snails recorded in Hong Kong were initially thought to belong to the genus *Cerithidea*, but recent studies have assigned some of the a priori *Cerithidea* spp. to the genus *Pirenella*, as well as unraveled a few cryptic species (Table 1). Along with another newly documented species, *Cerithideopsis largillierti* (Reid 2014), and the two previously recorded species from the genus *Terebralia*, there are 12 hitherto recorded potamidid species belonging to four genera in Hong Kong (Fig. 2). It should also be noted that the *Batillaria* spp., which were once assigned as members of the family Potamididae, have been transferred to the family Batillaridae (Ozawa et al. 2009). This article presents keys to aid in the identification of these highly similar potamidid snails living in local mangrove stands, together with an up-to-date checklist.

Fig. 1. Potamidid snails on mudflat (left) and tree trunk (right) in Ting Kok mangrove.
Table 1. Revisions on the genus Cerithidea.

<table>
<thead>
<tr>
<th>Invalid names/ misidentifications (Tam &amp; Wong 1997; Yang 2007)</th>
<th>Revised names/ cryptic species/ new record (Reid 2014; Reid &amp; Ozawa 2016)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cerithidea alata</td>
<td>Pirenella alata</td>
</tr>
<tr>
<td>Cerithidea cingulata</td>
<td>Pirenella nanhaiensis</td>
</tr>
<tr>
<td>Cerithidea djadjariensis</td>
<td>Pirenella asiatica</td>
</tr>
<tr>
<td>Cerithidea microptera</td>
<td>Pirenella microptera</td>
</tr>
<tr>
<td>Cerithidea ornata</td>
<td>Cerithidea tonkiniana</td>
</tr>
<tr>
<td>Cerithidea rhizophorarum</td>
<td>Cerithidea sinensis (new record)</td>
</tr>
<tr>
<td>Cerithidea sinensis</td>
<td></td>
</tr>
</tbody>
</table>

Basic morphological terminology

Potamidid snails have a typical spirally coiled shell (Fig. 3) akin to many other gastropods. Knowing the terminology used to describe the shell is a pivotal step in identification of potamidid snails. The protoconch (or apex) is the oldest or earliest part of the shell, which was the shell of a snail at its juvenile stage. As the snail continues to grow, its shell grows larger in a spiral fashion, forming a series of coils named whorls. The whorls overlap one another and the seam between whorls is termed the suture. All the whorls of the shell above the body whorl (i.e. the last and the largest coil) are collectively called a spire. Aperture is the opening of the shell at the body whorl from which the snail’s soft body emerges, and the left and right side of the aperture are known as the inner and outer lip respectively. Often the aperture may have openings at the anterior and/or posterior end forming a canal. Any linear spiral indentations on the surface of the shell can be referred to as grooves. The grooves separate the whorls into segments called cords. Sometimes the shell may also have raised, transverse ridges on the surface, which are termed the ribs. The varix, a thickened axial ridge is another important shell character in classification of potamidid snails. Varices are formed by considerable thickening of the outer lip during a resting stage in the growth of the shell.

**Fig. 3. Illustration of key morphological features of a potamidid (**Pirenella incisa***) shell.

Descriptions of potamidids in Hong Kong

**Cerithidea Swainson, 1840**

Three *Cerithidea* species are recorded in Hong Kong mangroves. They are characterized generally by having a worn off apex (Fig. 2), with about seven preserved spire whorls. A comparison of major morphological features of the three species is presented in Table 2.

**Cerithidea tonkiniana** Mabille, 1887

This species was previously described as ‘C. ornata’ (e.g. Tam & Wong 1997; Yang 2007), a species complex which has recently been found to encompass two superficially similar species, *C. balteata* (distributed from the Philippines down to the Solomon Islands and not found in Hong Kong) and *C. tonkiniana* (distributed from Southern Japan down to Vietnam, Reid et al. 2013; Reid 2014). It inhabits the landward edge (upper tidal levels) of mangroves, and attaches on mangrove trunks and branches by mucus during low tide.

**Cerithidea moerchii** (Adams, 1855)

This species had been wrongly identified as *C. rhizophorarum* (a species endemic to the Philippines) for more than a century, and only until recently been given its valid name (Reid 2014). It usually occurs on trunks and branches of mangrove plants, like *C. tonkiniana*, as well as on mudflat and boulders, and among seashore herbaceous plants (e.g. *Sesuvium portulacastrum*) near the mangroves.
Cerithidea sinensis (Philippi, 1848)

This species was once thought to occur only in northern China and Japan (Ma 2004) but later reported in Hong Kong by Reid (2014) based on a specimen collected in 1940. Our recent surveys have also reaffirmed the presence of this species in Hong Kong. Given its rarity and similarity to C. tonkiniana, the species can be easily overlooked in the field. Our field records indicate that the species, unlike the other two Cerithidea spp., usually occurs on mudflats rather than on branches or trunks of mangrove plants.

<table>
<thead>
<tr>
<th>Table 2. Morphological comparison of the three species in the genus Cerithidea.</th>
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</thead>
<tbody>
<tr>
<td><strong>C. tonkiniana</strong></td>
</tr>
<tr>
<td>Shell height</td>
</tr>
<tr>
<td>Aperture</td>
</tr>
<tr>
<td>Features of spire whorls</td>
</tr>
<tr>
<td>Ventrolateral varix</td>
</tr>
<tr>
<td>Shell colour</td>
</tr>
</tbody>
</table>

Cerithideopsis Thiele, 1929

Cerithideopsis largillierti (Philippi, 1848)

This species was found throughout the coast of China by Ma (2004), but has only recently been reported in Hong Kong at Tsim Bei Tsui (Reid & Claremont 2014). It might have been misidentified as ‘Cerithidea ornata’ (i.e. Cerithidea tonkiniana) previously due to their highly similar morphological features. The species inhabits a range of habitats including mudflats at high tidal levels, river mouths, among saltmarsh vegetation and at margins of brackish shrimp ponds (Reid & Claremont 2014).

Shell morphology: Up to 4 cm in height and is similar to the shell of Cerithidea tonkiniana and Cerithidea sinenis, with no distinctive grooves or cords on its whorls. It usually has a well-preserved apex and 9-11 whorls. Shell is pale brown with two darker brown bands (Reid & Claremont 2014).

Pirenella Gray, 1847

This genus was once termed “Cerithideopsilla” (Reid & Ozawa 2016). A total of six Pirenella spp. have been recorded in Hong Kong. All of them have three distinctive cords, two grooves and prominent axial ribs on spire whorls (Fig. 2). Based on common features, Reid & Ozawa (2016) further categorised Pirenella spp. into three major morphological groups, namely, ‘P. alata’, ‘P. incisa’ and ‘P. cingulata’.

‘P. alata’ group

Species in this group have a well-developed posterior canal detached from the body, forming a wing-like structure, and a strong basal projection of outer lip from the aperture, which forms an acute angle and covers the deep anterior canal from basal view (Fig. 7). Three species in this group have been recorded in Hong Kong, and a comparison of their major morphological features is presented in Table 3.

Pirenella alata (Philippi, 1849)

The species was earlier documented as Cerithidea alata (Yang 2007), and is usually found on upper shore under mangrove plants at low densities.

Pirenella microptera (Kiener, 1841)

A few earlier studies have reported this species along the coast of China including Hong Kong (Tam & Wong 1997; Ma 2004; Zhang & Li 2008). According to our surveys, the species seems to be rare in Hong Kong, and is usually found on upper shore under mangrove plants (Zhang & Li 2008; Reid & Ozawa, 2016).
**Pirenella nanhaiensis** Fu & Reid, 2016

This is a cryptic species which was first described by Reid & Ozawa (2016) based on molecular evidence from Ozawa et al. (2015). It can be found on mudflats adjacent to and within mangroves, and is rarer than *P. alata*.

<table>
<thead>
<tr>
<th>Table 3. Morphological comparison of the three species in the ‘<em>P. alata</em>’ group.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Shell height</strong></td>
</tr>
<tr>
<td><strong>Shape</strong></td>
</tr>
<tr>
<td><strong>Aperture</strong></td>
</tr>
<tr>
<td><strong>Features of spire whorls</strong></td>
</tr>
<tr>
<td><strong>Ventrolateral varix</strong></td>
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<tr>
<td><strong>Shell colour</strong></td>
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</tbody>
</table>

**‘P. incisa’ group**

This group is characterized by the presence of three to five strong spiral striae in the two grooves on their spire whorls (Fig. 10). Species in this group were previously described under an invalid name ‘Cerithidea djadjariensis’ which refers to a Pliocene fossil of *P. alata* (Reid & Ozawa 2016). Molecular evidence from Ozawa et al. (2015), however, showed that ‘C. djadjariensis’ was actually a complex of three species. These three species forms the ‘*P. incisa*’ group, and two of them occur in Hong Kong.

**Pirenella incisa** (Hombron & Jacquinot, 1848) and **Pirenella pupiformis** Ozawa & Reid, 2016

These species are superficially similar to each other, and an array of morphological features has to be examined holistically in order to distinguish the two species (Table 4). They are also sympatric on mudflats adjacent to and under mangrove trees, but *P. pupiformis* is relatively more abundant than *P. incisa* in general.

<table>
<thead>
<tr>
<th>Table 4. Morphological comparison of the two species in the ‘<em>P. incisa</em>’ group.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Shell height</strong></td>
</tr>
<tr>
<td><strong>Anterior canal</strong></td>
</tr>
<tr>
<td><strong>Aperture</strong></td>
</tr>
<tr>
<td><strong>Features of spire whorls</strong></td>
</tr>
<tr>
<td><strong>Ventrolateral varix</strong></td>
</tr>
<tr>
<td><strong>Shell colour</strong></td>
</tr>
</tbody>
</table>
‘P. cingulata’ group

Species without the detached posterior canal (i.e. the ‘wing’ structure) and the strong spiral striae in the grooves are collectively assigned to the ‘P. cingulata’ group.

*Pirenella asiatica* Ozawa & Reid, 2016

*P. asiatica* is a new species described by Ozawa & Reid (2016), which was previously misidentified as *Cerithidea cingulata* (a similar species which is actually distributed from India to Southeast Asia). It is the only species in this group recorded in Hong Kong, and is usually abundant on mudflats in front of mangrove plants at the seaward side of mangroves.

Shell morphology: up to 3 cm in height. It has a distinctive pattern of cords: 1\textsuperscript{st} cord is the widest and 2\textsuperscript{nd} cord is the narrowest (about half as wide as 1\textsuperscript{st} cord). The two grooves are equal in width, with no spiral stria (Fig. 10). Shell is generally orange brown to grey, and 1\textsuperscript{st} cord is usually paler, which make it easily distinguished from other *Pirenella* spp. in Hong Kong.

*Terebralia Swainson, 1840*

*Terebralia palustris* (Linnaeus, 1767)

This species has often been overlooked in Hong Kong as it is morphologically similar to *T. sulcata* (e.g. Wells 1985; Yang 2007). It is abundant on mudflat under mangrove trees and occasionally on rocks.

*Terebralia sulcata* (Born, 1778)

This species is generally abundant and occurs sympatrically with *T. palustris* in Hong Kong mangroves. In addition, it is often found on the lower trunk of mangrove plants (usually below 0.5 m from the ground). A morphological comparison of the two species is presented in Table 5.

**Table 5. Morphological comparison of the two species in the genus *Terebralia*.**

<table>
<thead>
<tr>
<th></th>
<th><em>T. palustris</em></th>
<th><em>T. sulcata</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Shell height</td>
<td>Usually about 3-4 cm in Hong Kong, although it can reach 19 cm in other regions (Houbrick 1991)</td>
<td>Up to 6 cm</td>
</tr>
<tr>
<td>Aperture</td>
<td>Moderately flared aperture; moderately thickened outer lip (Fig. 2); anterior canal not enclosed (Fig. 6)</td>
<td>Strongly flared aperture; strongly thickened outer lip (Fig. 2); anterior canal enclosed to form a tubular hole (Fig. 6)</td>
</tr>
<tr>
<td>Features of spire whorls</td>
<td>Four equal sized cords; broad axial ribs</td>
<td>Four to five cords (and sometimes six on body whorl); broad axial ribs</td>
</tr>
<tr>
<td>Ventrolateral varix</td>
<td>Prominent</td>
<td>Prominent</td>
</tr>
<tr>
<td>Shell colour</td>
<td>Usually brown to green, with yellow bands or spots</td>
<td>Usually brown to green, with yellow bands or spots; usually covered by a thin layer of mud in the field</td>
</tr>
</tbody>
</table>
Identification key

1a. Apex worn off as adults...................................................................................................................................... 2 (Cerithidea)

1b. Apex not worn off as adults.................................................................................................................................. 4

2a. Five distinctive primary cords on each spire whorl; usually white, enlarged ventrolateral vari (Fig. 4)........................................................................................................................................... Cerithidea moerchii

2b. Cords on spire whorl usually weak or absent (Fig. 4).................................................................................................................. 3

3a. Aperture moderately thickened; 14-19 axial ribs on second last whorl; spiral ridge absent; ventrolateral varix usually absent ........................................................................................................... Cerithidea sinensis

3b. Aperture weakly thickened; 11-25 axial ribs on second last whorl; five weak spiral ridges on whorl (usually eroded); ventrolateral varix strong (Fig. 5)................................................................... Cerithidea tonkiniana

4a. Cords on spire whorl absent or nearly invisible (Fig. 2)................................. Cerithideopsis largillierti

4b. Cords on spire whorl distinct ............................................................................................................................................................. 5

5a. Number of cords on spire whorl equals to or more than four ....................... 6 (Terebralia)

5b. Number of cords on spire whorl equals to three ................................................................................................................... 7 (Pirenella)

6a. Aperture moderately flared; outer lip moderately thickened (Fig. 2); four cords on spire whorls; anterior canal not enclosed to form a tubular hole (Fig. 6)........................................ Terebralia palustris

6b. Aperture strongly flared; outer lip strongly thickened (Fig. 2); four to five cords on spire whorls; anterior canal enclosed to form a tubular hole (Fig. 6)........................................ Terebralia sulcata

Fig. 4. Comparison of the spire whorls of C. tonkiniana (left) and C. moerchii (right). Prominent, white ventrolateral varix indicated by the red arrow.

Fig. 5. Basal view of C. tonkiniana (left) and C. sinensis (right). Strong ventrolateral varix indicated by the red arrow.

Fig. 6. Comparison of the anterior canals of T. sulcata (left) and T. palustris (right). Tubular hole indicated by the red arrow.
7a. Posterior canal slightly or strongly detached to form a ‘wing’ structure; basal projection of outer lip strong with acute angle which covers the anterior canal from basal view (Fig. 7)........................................................................................................................................8 (‘P. alata’ group)

7b. Posterior canal not detached; basal projection of outer lip weak to moderate, more round, partially or not covering the anterior canal........................................................................................................10

8a. 3rd cord of spire whorls widest (Fig. 9); shell narrower; outer lip moderately thickened; aperture strongly detached posteriorly (Fig. 7)........................................................................................................................................9

8b. 1st cord of spire whorls widest (Fig. 8); shell wider; outer lip strongly thickened; aperture slightly detached posteriorly to form a round ‘wing’ (Fig. 8).........................Pirenella nanhaiensis

9a. 1st and 2nd grooves subequal (Fig. 9); posterior canal strongly detached to more than 50° from the axis to form a ‘wing’.........................................................Pirenella alata

9b. 1st groove twice as wide as 2nd groove (Fig. 9); posterior canal strongly detached to less than 50° from the axis to form a ‘wing’.................................................................Pirenella microptera

10a. Three to five strong spiral striae in the two spiral grooves on spire whorls (Fig. 10); cords equal or subequal..............................................................................................................................11 (‘P. incisa’ group)

10b. Spiral striae in grooves weak or absent; 1st cord widest, 2nd cord narrowest (about half as wide as 1st cord) (Fig. 10)..................................................................................................................Pirenella asiatica

Fig. 7. Distinctive features of ‘P. alata’ group (P. microptera): ‘wing’(left) and strong basal projection of outer lip (right). Angles of ‘wing’ and basal projection indicated by red lines.

Fig. 8. Distinctive features of P. nanhaiensis: aperture (left) and spire whorl (right). Round ‘wing’ indicated by the red arrow.

Fig. 9. Comparison of the spire whorl structures of P. alata (left) and P. microptera (right).

Fig. 10. Comparison of the spire whorl structures of P. incisa (left) and P. asiatica (right). Spiral striae in the grooves indicated by the red arrow.
11a. Moderate (about 90°) basal projection of outer lip covering the anterior canal at basal view (Fig. 11); anterior canal deep (Fig. 12); three equal cords; ventrolateral varix usually prominent (Fig. 11); strongly or moderately angled at base (Fig. 13)........................................... *Pirenella incisa*

11b. Weak (about 120°) basal projection of outer lip not covering the anterior canal at basal view (Fig. 11); anterior canal wide (Fig. 12); 1st cord slightly wider; ventrolateral varix weak (Fig. 11), round at base (Fig. 13)........................................................................................................... *Pirenella pupiformis*
An updated species checklist of the family Potamididae in Hong Kong mangroves

Potamididae H. Adams & A. Adams, 1854

Cerithidea Swainson, 1840

Cerithidea tonkiniana Mabille, 1887
Cerithidea moerchii (A. Adams, 1855)
Cerithidea sinensis (Philippi, 1848)

Cerithideopsis Thiele, 1929
Cerithideopsis largillierti (Philippi, 1848)

Pirenella Gray, 1847

Pirenella alata (Philippi, 1849)  
Pirenella microptera (Kiener, 1841)  
Pirenella nanhaiensis Fu & Reid, 2016  
Pirenella incisa (Hombron & Jacquinot, 1848)  
Pirenella pupiformis Ozawa & Reid, 2016  
Pirenella asiatica Ozawa & Reid, 2016

Pirenella 'alata' group
Pirenella 'incisa' group
Pirenella 'cingulata' group

Terebralia Swainson, 1840
Terebralia palustris (Linnaeus, 1767)
Terebralia sulcata (Born, 1778)

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First Record of Dung Beetles *Onthophagus roubali* (羅氏嗡蜣螂), *Copris szechouanicus* (四川糞蜣螂) and *Microcopris propinquus* (近小糞蜣螂) in Hong Kong

Beetle Working Group

In the dung beetle surveys conducted by the Beetle Working Group of the Agriculture, Fisheries and Conservation Department between 2014 and 2016, 3 species of dung beetles (Family Scarabaeidae; Subfamily Scarabaeinae), namely *Onthophagus roubali* (羅氏嗡蜣螂), *Copris szechouanicus* (四川糞蜣螂) and *Microcopris propinquus* (近小糞蜣螂), were recorded in Hong Kong for the first time. This article describes the key morphological features and distribution of these species.

*Onthophagus (s. str.) roubali* Balthasar, 1935 (羅氏嗡蜣螂)

A specimen of *Onthophagus roubali* was collected from Ng Tung Chai in November 2014. It is dark brown and about 7.5 mm long. The body is elongated oval and rather convex with gently flattened posterior part. The head has a transverse carina (橫脊) but is without conspicuous prominence (角突). The pronotum (前胸背板) is sparsely and coarsely punctate and is ridged along the midline of the anterior part. Apart from Hong Kong, *O. roubali* was also recorded in Sichuan and Taiwan.

**Fig. 14.** *Onthophagus roubali* (a) dorsal view; (b) ventral view and (c) lateral view.
Copris (s. str.) szechouanicus
Balthasar, 1958 (四川糞蜣螂)

Two specimens of Copris szechouanicus were collected from Wu Kau Tang in March 2015. The body of this species is black and about 15-17 mm in length. The clypeus (唇基) is wide and is weakly emarginated in the middle. The pronotum is densely and coarsely punctate. The elytra (鞘翅) has considerably large punctures and convex intervals between striae (刻點行). A strong prominence with a broad base is present on its head. Outside Hong Kong, C. szechouanicus was also found in Fujian, Guizhou, Hubei, Sichuan and Zhejiang.

Microcopris propinquus
(Felsche, 1910) (近小糞蜣螂)

Two specimens of Microcopris propinquus were collected from Sai Kung East Country Park in February 2016. This species is about 11 mm long and is black without metallic sheen. The 9th stria is absent on the elytra. The elytral apex has sparse fine punctures and the tip of protibial spur (前足脛節端距) is outwardly curved. The clypeal margin is widely incised in the middle with a subtriangular tooth on each side of the incision which differentiates it from M. reflexus. Apart from Hong Kong, M. propinquus was also recorded in Fujian, Sichuan, Taiwan, Yunnan, Zhejiang, and Laos.

Fig. 15. Copris szechouanicus (a) dorsal view; (b) ventral view and (c) lateral view.

Fig. 16. Microcopris propinquus (a) dorsal view; (b) ventral view and (c) lateral view.
Erratum: Upon further study of the genitalia of the *Microcopris* species reported in Cheung et al. (2015) by the authors, the species should be *M. reflexus* instead of *M. apicepunctatus*. Hence, to date, there are two species of *Microcopris* (i.e. *M. reflexus* and *M. propinquus*) recorded in Hong Kong.

Acknowledgements

We would like to express our sincere gratitude to Prof. Yang Xing-ke (楊星科教授) and Dr. Bai Ming (白明博士) of the Chinese Academy of Sciences for their advice on the identification and distribution of the dung beetles reported in this article.

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陳克敏。2002。糞金龜的世界。台北：貓頭鷹出版社。(In Chinese only)
First Record of Longhorn Beetles Chloridolum jeanvoinei (網點長綠天牛) and Epepeotes luscus (擬鹿天牛) in Hong Kong

Beetle Working Group

In the ecological surveys conducted by the Beetle Working Group of the Agriculture, Fisheries and Conservation Department in 2015, two specimens of longhorn beetle (Family Cerambycidae) were collected and identified as the first record to Hong Kong. This article gives a brief description on the characteristics of these two species, Chloridolum jeanvoinei and Epepeotes luscus.

Chloridolum (Leontium) jeanvoinei (Pic, 1932) (網點長綠天牛)

A specimen of Chloridolum jeanvoinei was collected in Tai Tam Country Park in April 2015. It belongs to the subfamily Cerambycinae (天牛亞科). Its body length is 17 mm. It has metallic green elytra (鞘翅), bluish black scutellum (小盾片), and purplish blue antennae and legs. One of the key distinctive features of this species is the reticular punctate elytra. Outside Hong Kong, C. jeanvoinei is also found in Guangdong, Guangxi, Hainan, Laos and Vietnam.

Fig. 17. Chloridolum jeanvoinei (a) dorsal view; and (b) close-up of the reticular punctate elytra.
**Epepeotes luscus (Fabricius, 1787) (擬鹿天牛)**

A specimen of *Epepeotes luscus* was collected in Shing Mun Country Park in August 2015. It belongs to the subfamily Lamiae (溝脛天牛亞科). It has black body clothed with short greyish yellow pubescence and its body length is 25 mm. This species is easily recognisable by the three orange longitudinal stripes on its head and pronotum (前胸背板) and the black mark on each elytron base. Apart from Hong Kong, *E. luscus* was also recorded in Jiangxi, Sichuan, Yunnan, Indonesia, Laos, Malaysia, Myanmar, Philippines, Thailand and Vietnam.

Fig. 18. *Epepeotes luscus* (a) dorsal view; and (b) lateral view.

**Acknowledgements**

We would like to thank Dr. Joan Bentanachs (Spain), as well as Prof. Yang Xing-ke (楊星科教授) and Dr. Lin Mei-ying (林美英博士) of the Chinese Academy of Sciences, for their advice on the identification of the longhorn beetles reported in this article.

**References**


林美英。2015。常見天牛野外識別手冊。重慶：重慶大學出版社。(In Chinese only)
Table 1. Local restrictedness and known host plants of *Euthalia niepelti*, *Lethe chandica* and *Notocrypta paralysos*

<table>
<thead>
<tr>
<th>Family</th>
<th>Nymphalidae</th>
<th>Nymphalidae</th>
<th>Hesperiidae</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-family</td>
<td>Nymphalinae</td>
<td>Satyrinae</td>
<td>Hesperiinae</td>
</tr>
<tr>
<td>Species Name</td>
<td><em>Euthalia niepelti</em></td>
<td><em>Lethe chandica</em></td>
<td><em>Notocrypta paralysos</em></td>
</tr>
<tr>
<td>Chinese Name</td>
<td>綠裙邊翠蛺蝶</td>
<td>曲紋黛眼蝶</td>
<td>窄紋袖弄蝶</td>
</tr>
<tr>
<td>Local Distribution</td>
<td>Fung Yuen, Ho Pui, Luk Po, Lai Chi Wo, Luk Keng, Man Uk Pin, Ngau Ngak Shan, Ping Shan Chai, Sha Lo Tung, Shing Mun, So Lo Pun, Wu Kau Tang, Yung Shue Au</td>
<td>Chuen Lung, Fung Yuen, Hoi Ha, Hok Tau, Luk Keng, Mui Ts Lam, Nam Chung, Ngau Ngak Shan, Pak Tam Chung, Ping Shan Chai, Sam A Tsuen, Shing Mun, Tai Lam, Tai Mo Shan, Tai Po Kau, To Kwa Peng, Wu Kau Tang, Yuen Tun Ha</td>
<td>Deep Water Bay Valley, Fung Yuen, Hong Kong Wetland Park, Mui Ts Lam (Ma On Shan), Pak Tam Chung, Shek Mun Kap, Shing Mun, Shui Hau (Lantau Island), Tai Lam, Victoria Peak, Wong Mo Ying</td>
</tr>
<tr>
<td>Local Restrictedness</td>
<td>Rare (R)</td>
<td>Uncommon (UC)</td>
<td>Rare (R)</td>
</tr>
<tr>
<td>Known Native Host Plants</td>
<td><em>Schima superba</em></td>
<td><em>Bambusa ventricosa</em></td>
<td><em>Alpinia hainanensis</em></td>
</tr>
</tbody>
</table>

Further observations will be required to confirm other potential host plants.
References


What’s New

First Record of Pacific Swallow (*Hirundo tahitica* 洋斑燕) in Hong Kong

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Biodiversity Conservation Division

漁農自然護理署職員於 2016 年 10 月 3 日在大生圍記錄到一隻洋斑燕 (*Hirundo tahitica*), 為香港的首次記錄。本文就洋斑燕的特徵及分布作簡短的介紹。

**Introduction**

During a biodiversity survey on 3 October 2016, four swallows were found flying over the fishponds at Tai Sang Wai near Fairview Park at 8:55 a.m. One of the swallows then perched on a power line three meters away from us. The individual was observed and photographed for more than five minutes.

Unlike Barn Swallow (*Hirundo rustica*), a common passage migrant and summer visitor to Hong Kong, this individual did not possess a dark blue breast-band. In addition, its lower abdomen was grey and its undertail coverts were black/dark with pale fringes, suggesting that it was a Pacific Swallow (*Hirundo tahitica*).

Upon returning at 11:55 a.m., the group of four swallows was found perching on the same power line (Fig. 22), with only one Pacific Swallow and the other three swallows were Barn Swallows.

**Identification**

Pacific Swallow is a small to medium-sized swallow, with a body length of 13-14 cm. Its forehead and chest are chestnut red, crown and upperparts glossy steel-blue, wings and tail brownish-black and underparts grey. It has a slightly forked tail that lacks tail-streamers (Brazil 2009; del Hoyo & Collar 2017). The species largely resembles but can be distinguished from Barn Swallow by its smaller size, duskier and greyer underparts, the lack of a dark blue breast-band, shorter tail and the lack of tail-streamers.

The individual in question matches well with the above descriptions and is therefore identified as Pacific Swallow.

**Distribution and habitat**

Pacific Swallow is common in south India, southeast Asia, South China Sea Islands, Taiwan, the Ryukyu Islands, the Philippines, New Guinea to Pacific Islands. Unlike its migratory relatives, Pacific Swallow is mainly a resident species though there have been reports of post-breeding movement to lower altitudes in India and Sri Lanka, and between islands in Ryukyu where it joins flocks of other swallows (del Hoyo & Collar 2017). It prefers coastal areas, open grounds, forested hills, as well as suburban (even urban in Taiwan) to rural areas, from 0 to 2400m above sea level. It is often found close to water bodies (Brazil 2009; del Hoyo & Collar 2017).
Acknowledgements

The authors would like to thank the Records Committee of Hong Kong Bird Watching Society for assessing this record and Ms. Ivy W.Y. So of the Wetland and Fauna Conservation Division for reviewing this article.

References


(Note: In line with the International Ornithologists’ Union, this article considers *H. javanica* a subspecies of *H. tahitica.* )