

The jewel beetles (Coleoptera; Buprestidae) of Seychelles

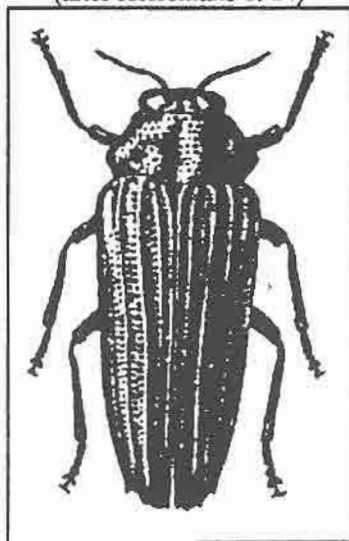
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Introduction

The jewel beetles (Family Buprestidae), also called splendour beetles and metallic wood-boring beetles, are hard-bodied, shiny, metallic-looking insects ranging in Seychelles from just over 4mm to nearly 30mm in length. The head is sunk deeply into the thorax, the eyes are relatively large and the antennae short and saw-toothed, with eleven segments. There are five tarsal segments on each leg. The larvae are legless and have a broad, flattened thorax. They bore galleries under the bark of trees.

Apart from specimens collected by the two Percy Sladen Trust expeditions in 1905 and 1908-1909 (Kerremans 1914) and the creation of the genus *Aldabrica* by Cobos Sanchez (1981), the jewel beetles of Seychelles appear to have been ignored by taxonomists and ecologists throughout most of the twentieth century. To facilitate further fieldwork on this group, I provide a simple identification key to the Seychellois species and summarise what is known of their distribution and biology.

Fig. 1. *Aldabrica fryeri*
(after Kerremans 1914)



NOTES

Key to the Buprestidae recorded from the granitic islands of Seychelles

1. Elytra with three transverse black bands *Agrilus owas*
Elytra without transverse black bands 2.
2. Less than 15mm long from head to tip of abdomen.
Dorsum blackish all over, including sides of pronotum and outer edges of elytra *Chrysobothris dorsata*
Over 15mm long from head to tip of abdomen.
Dorsum not blackish all over: sides of pronotum whitish or reddish, or outer edges of elytra smeared with yellow 3.
3. Posterior part of sides of pronotum reddish.
Scutellum between bases of elytra clearly elongated, pointing backwards. Eyes less than 1mm apart at their closest *Belionota prasina*
No part of pronotum reddish. Scutellum very small, indistinct to naked eye. Eyes over 1mm apart at their closest 4.
4. Sides of pronotum whitish. Pronotum distinctly crossed throughout its length by a thin line. Eyes about 2mm apart *Iridotaenia mahena*
Sides of pronotum not whitish. Pronotum not completely divided length-wise. Eyes more than 2mm apart *Dicercomorpha alluaudi*

Key to the Buprestidae recorded from Aldabra

1. Over 5mm long, grossly punctate, pronotum angularly dilated about one-third of the way from the base *Aldabrica fryeri*
2. Less than 5mm long, finely punctate, pronotum rounded at the sides *Sponsor pilosellus*

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Notes on distribution and biology

1. *Agrilus owas* Castelnau & Gory, 1837

Kerremans (1914) reports that one specimen of this species was found at Cascade Estate on Mahé at around 250m above sea-level during the Percy Sladen Trust Expeditions. He does not state which of the two expeditions discovered it. This is the only species from the granitic islands not to have been found in recent years. It was originally described from Madagascar.

2. *Chrysobothris dorsata* Fabricius, 1787

In Seychelles this species has been recorded only from Mahé. During the first Percy Sladen Trust Expedition, in 1905, Gardiner collected it there, but Kerremans (1914) gives no indication of the numbers and exact localities involved. In 1909, during the second expedition, "several" specimens, including larvae and pupae from dead *Adenantha pavonina* L. wood were given by "R.P. Dupont", presumably Rivals Dupont, then in charge of the Botanical Gardens (Lionnet 1983).

In October 1995 I observed a specimen of *C. dorsata* resting on a dead *Timonius sechellensis* Summerhayes in sunlight at 5:30pm at Ma Josephine, at about 300 metres above sea-level. In February 1996 I came across a dead specimen that had been trodden upon on the stairs of the television station of the Seychelles Broadcasting Corporation at Hermitage. Its elytra were partly opened, showing the dorsal surface of the abdomen to be a vivid metallic red, in sharp contrast with the blackish grey of the rest of the body.

Outside Seychelles, *C. dorsata* is reported to occur in the Mascarenes and Southern Africa (Kerremans 1914). In the Coleoptera collection of the Natural History Museum, London there are specimens from Mauritius, Réunion, Madagascar and the African mainland. Brown (unpublished note, 1953) found it at the end of March in an *Anacardium* (? *occidentale* L.) log in Mombasa, Kenya.

3. *Belionota prasina* Thunberg, 1789

In Seychelles, this species is also known only from Mahé. Two specimens, and larvae and pupae from dead mango (*Mangifera indica* L.) wood were collected in 1908-9 during the second Percy Sladen Trust expedition (Kerremans 1914).

In August 1995 I saw at least three specimens on a recently felled mango tree in bright sunshine at 1:45pm at Hermitage, on the wooded slope behind Victoria hospital at an altitude of 35 metres. In September 1995, one flew into my flat at Anse Nord-Est at night, presumably attracted to the lights. In February 1996 I observed one circling over a pile of recently felled rubber (*Hevea brasiliensis* (Willd. ex Juss.) Muell. Arg.) and cashew (*Anacardium occidentale* L.), again in bright sunlight, at 1:10pm at Marie Laure Estate (=Mount Simpson

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Estate), some 90 metres above sea-level. It landed on the main stem of a felled rubber sapling, crawled up and down it and then flew away. Similar behaviour, this time on a felled *Paraserianthes falcataria* (L.) Niels, was observed at 1:30 pm in April 1996 near the Fisherman's Cove Estate, at approximately the same elevation.

B. prasina has also been recorded from the Mascarenes, Indo-Malaysia and eastern Africa (Kerremans 1914). Tung (1983) gives its Asian range as "India to Indo-China, China, Taiwan, south to Peninsular Malaysia, Sumatra, Java, Borneo and Maluku (the Moluccas)". At the Natural History Museum, London there are specimens from Africa, Mauritius, Sri Lanka, the Andaman and Nicobar islands and the Asian mainland. Brown (unpublished note, 1953) found this species too at the end of March in an *Anacardium* (? *occidentale* L.) log in Mombasa, Kenya. Tung (1983) describes *B. prasina* as "dwelling among foliage". He considers it a very common beetle in Malaysia and says that it is frequently seen on the bark of kapok (*Ceiba pentandra* (L.) Gaertn.) and casuarina (*Casuarina equisetifolia* J.R. & G. Forster).

4. *Iridotaenia mahena* Fairmaire, 1891

This was the first jewel beetle to be reported from Seychelles. The description was based on a specimen from Mahé given to Fairmaire by Gustave Fallou. It has not been possible to verify if this is the specimen that according to Kerremans (1914) was collected by the French priest Philibert Meynet, who arrived in Seychelles in 1880 and died there in 1903 (Legrand 1965). During his stay in Seychelles in 1892, Alluaud collected *I. mahena* on La Digue (Kerremans 1893). He visited the island during the last week of April (Alluaud 1894). Gardiner and Scott collected the species on Mahé during the 1905 and 1908-1909 Percy Sladen Trust expeditions respectively (Kerremans 1914).

On Mahé, I have frequently observed *I. mahena* resting on foliage exposed to bright sunlight at Marie Laure Estate, from 40m to 90m above sea-level (dates not recorded). I have come across the species on Silhouette as well. I observed one specimen resting on *Ficus lutea* Vahl, foliage not far from the beach at Anse Mondon in July 1990 around the middle of the day and on unidentified vegetation some 150m above the coast of La Passe (date not recorded).

This species appears to be endemic to Seychelles. According to Fairmaire (1891), it resembles *I. mirabilis* from Borneo.

5. *Dicercomorpha alluaudi* Kerremans, 1893

This species was first collected by Alluaud on La Digue at the end of April 1892 (Alluaud 1894). It was not found by either of the Percy Sladen Trust expeditions at the beginning of the century. Apparently the species was never collected again until more than a century after the type series: a beetle found by Josie Michaud-Payet on the second-floor balcony of the television station of the

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Seychelles Broadcasting Corporation at Hermitage on 4th October 1994 was identified by me as *D. alluaudi*!

This species also appears to be endemic to Seychelles. Kerremans (1893) states that it closely resembles *D. farinosa* Thom. from the Andaman islands. He adds that the genus *Dicercomorpha* is found mainly in the "Indo-Malayan and Malayo-Australian regions", with one species in Fiji. Alluaud (1894) considers that the distribution of the genus *Dicercomorpha* is more or less like that of leaf insects of the genus *Phyllium*. He uses the presence of both in the granitic Seychelles as evidence of the Oriental affinities of the islands' insect fauna.

6. *Aldabrica fryeri* (Kerremans, 1914)

This species was first collected on Île Michel, at the eastern end of Aldabra lagoon, in October 1908, during the second Percy Sladen Trust expedition, by Fryer (Kerremans 1914). It was originally described as *Pseudocastalia fryeri*. Cobos Sanchez (1981) created the genus *Aldabrica* for the species. It was collected by suction trap on Île Picard by F. Joplinffe in December 1972 (specimen in the Natural History Museum, London).

7. *Sponsor pilosellus* Kerremans, 1914

This species was first collected by Fryer at "Takamaka" on Aldabra (there are several localities in the eastern part of Grande Terre island that have "Takamaka" as part of their name) in November 1908 during the second Percy Sladen Trust expedition. It may not be the only species of *Sponsor* to be found on Aldabra. During the 1967-1969 Royal Society expedition to the atoll, Hutson and Cogan collected two specimens on Île Michel. These were determined by B. Levey as "*Sponsor* sp. near *S. oblongus* of Mauritius" (data label with specimens in the Natural History Museum, London). The Natural History Museum has specimens of other *Sponsor* species from Mauritius, Rodrigues, Réunion and Madagascar.

Conclusion

Further research should be carried into the biology of all the species. For conservation purposes, it is necessary to ascertain the ecological requirements of the endemic species in particular. Also, it is necessary to verify which species occur on Praslin, the second largest granitic island of Seychelles.

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Table 1. Known distribution of Buprestidae in Seychelles

	Mahé	La Digue	Silhouette	Aldabra		
				Michel	Picard	Takamaka
1. <i>Agrilus owas</i>	+					
2. <i>Chrysobothris dorsata</i>	+					
3. <i>Belionota prasina</i>	+					
4. <i>Iridotaenia mahena</i>	+	+	+			
5. <i>Diceromorpha alluaudi</i>	+	+				
6. <i>Aldabrica fryeri</i>				+	+	
7. <i>Sponsor pilosellus</i>				+		+

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