

Biodiversity Record: The soybean leaf-beetle, *Phaedonia inclusa*, at Hougang

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Recommended citation. Chan S-Y & Lau WL (2023) Biodiversity Record: The soybean leaf-beetle, *Phaedonia inclusa*, at Hougang. Nature in Singapore, 16: e2023043. DOI: 10.26107/NIS-2023-0043

Subjects: Soybean leaf-beetle, *Phaedonia inclusa* (Insecta: Coleoptera: Chrysomelidae).

Subjects identified by: Chan Sow-Yan and Lau Wing Lup.

Location, date and time: Singapore Island, Hougang estate, Hougang Street 51; 8 November 2022, around 0830 hrs.

Habitat: Urban. Patch of grass near a pavement outside a shopping mall (Fig. 1).

Observer: Lau Wing Lup.

Observation: Around seven beetles, each about 4.5 mm (body length), were found in close proximity to each other on leaves of the creeping woodsorrel (*Oxalis corniculata*) (Fig. 2). The beetles were not observed to be feeding on the leaves. These insects appear to play dead when disturbed, becoming immobile and tumbling to the ground. They got on their feet again after a while if left alone. These beetles have a round body and blackish brown elytra (forewings) with yellowish-brown lateral edges (Figs. 3–7). Their tarsal claws are simple.



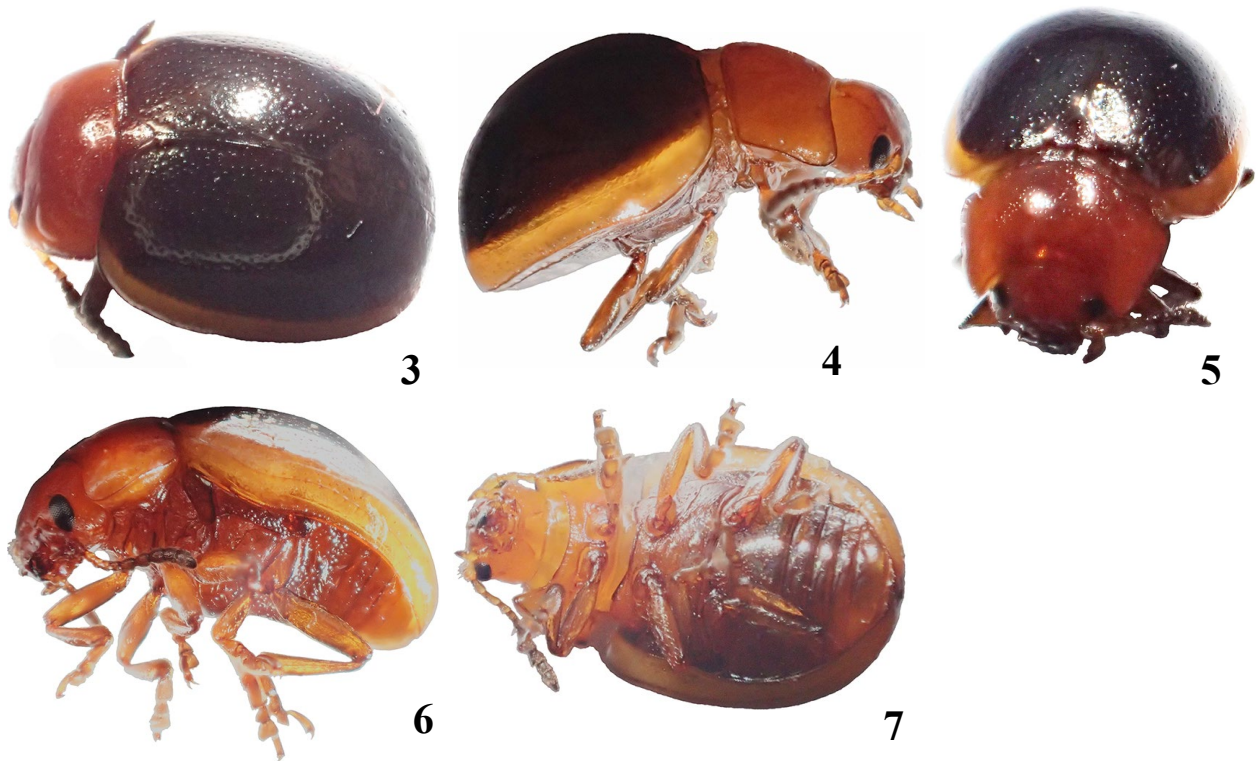
Fig. 1. Grass patch beside pavement where soybean leaf-beetles were found. Fig. 2. One of the soybean leaf-beetles in-situ on the leaf of the creeping woodsorrel. (Photographs by: Lau Wing Lup)

Remarks: *Phaedonia inclusa* is a serious pest of soyabean leaves in Central and East Java, Indonesia, where it was first recorded on this introduced crop in 1905. Intriguingly in West Java, where soyabean is extensively cultivated, *Phaedonia inclusa* occurs solely on the cover crop plants, *Desmodium* spp. (beggar lice) and *Pueraria phaseoloides* (Japanese arrowroot) (Ankersmit, 1953). It is believed that *Phaedonia inclusa* in Central Java had adapted to exploit soyabean, and subsequently spread to East Java, where soyabeans are also widely cultivated. *Phaedonia inclusa* was introduced into southern Sumatra about 1940, probably with cattle fodder (Ankersmit, 1953). In Indonesia, *Phaedonia inclusa* is also known to be a minor leaf defoliator of agarwood trees (*Aquilaria* sp.) (Syazwan et al., 2019).

Besides Indonesia, *Phaedonia inclusa* has also been found in Bhutan and India (Kimoto, 2005; as *Phaedonia inclusa indica*), as well as in Peninsular Malaysia (Mohamedsaid, 1997; 2004). Its occurrence in Singapore should not be unexpected, but it is not clear if this species is native there. It is also unclear if the beetles in this observation were infesting the plants on the grass patch.

Literature cited:

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Figs. 3–7. A soybean leaf-beetle of about 4.5 mm (length) viewed from multiple angles. Fig. 3. Dorso-lateral view. Fig. 4. Lateral view. Fig. 5. Dorso-frontal view. Fig. 6. Latero-ventral view. Fig. 7. Ventral view. (Photographs by: Lau Wing Lup).