Date of Publication: 28 December 2022 DOI: 10.26107/NIS-2022-0146 © National University of Singapore

## Biodiversity Record: A yellow spotless ladybird, Illeis koebelei

Chan Sow-Yan\* & Lau Wing Lup

Email: <a href="mailto:chansowyan@gmail.com">chansowyan@gmail.com</a> (\*corresponding author), <a href="mailto:suiseki1984@yahoo.com.sg">suiseki1984@yahoo.com.sg</a>

**Recommended citation.** Chan-SY & Lau WL (2022) Biodiversity Record: A yellow spotless ladybird, *Illeis koebelei*. Nature in Singapore, 15: e2022146. DOI: 10.26107/NIS-2022-0146

Subject: Yellow spotless ladybird, *Illeis koebelei* (Insecta: Coleoptera: Coccinellidae).

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

Location, date and time: Singapore Island, Hougang Avenue 10; 21 September 2022, around 1019 hrs.

Habitat: Urban. On the sixth floor of a concrete high-rise residential building.

Observer: Lau Wing Lup.

**Observation:** An adult of about 3 mm (Figs. 1 & 2) was spotted motionless on the underside of a leaf of a cupid's shaving brush (*Emilia sonchifolia*) growing in a flower pot. The surface of the leaf was covered by a silvery white and powdery substance which is believed to be mildew, and on which the ladybird appeared to be feeding (Fig. 3).







Figs. 1–3. Dorsal views of the ladybird *Illeis koebelei*.

Fig. 1. Fronto-dorsal view.

Fig. 2. Latero-dorsal view of left side.

Fig. 3. Latero-dorsal view of right side. Note white mildew on the leaf which the ladybird seemed to be eating.

(Photographs by: Lau Wing Lup).

**Remarks**: Most ladybird beetles are predators of insects (Giorgi et al., 2009), but members of the genus *Illeis* are among a minority that eat fungi (mycophagous). About five species occur in south and east Asia and Oceania (Fürsch, 1990). *Illeis koebelei* has been recorded in the Philippines (Recuenco-Adorada & Gapud, 1998), Japan (Takeuchi et al., 2000), China (Wu et al., 2011), and in Korea, where this species was found on 12 species of plants infected with

powdery mildew (Lee et al., 2015). Although it occurs in built-up areas, *Illeis koebeli* does not appear to be locally common. It was not recorded in two recent reports on urban ladybirds in Singapore (see Hwang & Yue, 2015; Ng, 2019).

## Literature cited:

- Fürsch H (1990) Valid genera and subgenera of Coccinellidae. Coccinella, 2: 7–18.
- Giorgi JA, Vandenberg NJ, McHugh JV, Forrester JA, Ślipiński SA, Miller KB, Shapiro LR & Whiting MF (2009) The evolution of food preferences in Coccinellidae. Biological Control, 51: 215–231.
- Hwang YH & Yue ZEJ (2015) Observation of biodiversity on minimally managed green roofs in a tropical city. Journal of Living Architecture, 2: 9–26.
- Lee YS, Jang MJ, Lee JG, Kim JR & Lee JH (2015) Host plants and biological characteristics of *Illeis koebelei* Timberlake (Coleoptera: Coccinellidae: Halyziini) in Gyeonggi-do. Korean Journal of Applied Entomology, 54: 295–301.
- Ng MFC (2019) Ladybird beetles on a rooftop garden at Yishun. Singapore Biodiversity Records, 2019: 44-45.
- Recuenco-Adorada JD & Gapud VP (1998) Philippine species of *Illeis* Mulsant (Coleoptera: Coccinellidae: Coccinellinae: Psylloborini). Philippine Entomologist, 12: 43–53.
- Takeuchi M, Sasaki Y, Sato C, Iwakuma S, Isozaki A & Tamura M (2000) Seasonal host utilization of mycophagous ladybird *Illeis koebelei* (Coccinellidae: Coleoptera). Japanese Journal of Applied Entomology and Zoology, 44: 89–94.
- Wu W, Liu D, Zhang P & Zhang Z (2011) Community structure and diversity of ladybugs in Baihualing of Gaoligong Mountain I Species composition and population structure. Plant Diseases and Pests, 2: 46–48.