

## Biodiversity Record: Re-discovery of the lace bug, *Stephanitis (Menodora) kardia*

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**Recommended citation.** Yap EH & Ong RSL (2025) Re-discovery of the lace bug, *Stephanitis (Menodora) kardia*. Nature in Singapore, 18: e2025012. DOI: 10.26107/NIS-2025-0012

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**Subjects:** Lace bug, *Stephanitis (Menodora) kardia* (Insecta: Hemiptera: Tingidae).

**Subjects identified by:** Yap Ee Hean and Hwang Wei Song.

**Location and dates:** Singapore Island, Singapore Botanic Gardens; 2 & 6 September 2024.

**Habitat:** Parkland. Under the leaves of the native Tampines tree, *Sloetia elongata* (Angiosperms: Rosales: Moraceae) (Fig. 4).

**Observer:** Yap Ee Hean.

**Observations:** About a dozen adults and nymphs of the lace bug (Figs. 1–3) were observed under the leaves of *Sloetia elongata*. Voucher specimens were collected with permission from the National Parks Board, and subsequently deposited in the Zoological Reference Collection (ZRC), of the Lee Kong Chian Natural History Museum, at the National University of Singapore.

**Remarks:** The subject of this record, *Stephanitis (Menodora) kardia* Drake & Ruhoff (1960), is currently known only from Singapore and nowhere else. Until now, the species was known only from the holotype and a paratype, both males, collected by Charles Fuller Baker, an American entomologist and botanist who worked briefly at the Singapore Botanic Gardens as acting Assistant Director in 1917. Despite the lack of a collection date attributed to the types, Baker's short stint in Singapore suggests that these were collected (and the species last seen) over a century ago. Our record and collection of both adult female (Fig. 1A) and immature (Fig. 2 & 3B) specimens is considered a re-discovery of the species. The identification of the host plant (Fig. 4), and other data obtained add significantly to the basic biological information of this poorly known species. Because its host plant *Sloetia elongata* also occurs in neighbouring regions like Sumatra, Peninsular Malaysia and Borneo, it is likely that *Stephanitis kardia* will be found to occur outside Singapore. The con-familial *Cylcotynaspis acalyptoides* Montandon (1892), previously thought to be endemic to Singapore, has since been found in Thailand (Guilbert & Guidoti, 2018).

The family Tingidae comprises more than 2,500 described species in about 300 genera (Guidoti et al., 2015). These cosmopolitan bugs are typically characterized by their delicate, lace-like wings which give them their common name: lace bugs. They are phytophagous, with many being restrictive in their host preference. A few exceptions, like the locally-occurring banana lace bug *Stephanitis typica*, feeds on a wide range of mainly monocotyledonous plants (Drake & Ruhoff, 1965; pers. obs.) and is a known agricultural pest.

Regional checklists of the Tingidae have been published recently, including for Laos (Guilbert, 2007), Vietnam (Guilbert, 2015) and Thailand (Guilbert & Guidoti, 2018). The tingid fauna of Singapore, however, remains unconsolidated. The world catalog by Drake & Ruhoff (1965) lists 8 species as present in Singapore, but a compilation by the corresponding author has tallied over 30 species (unpub. data).

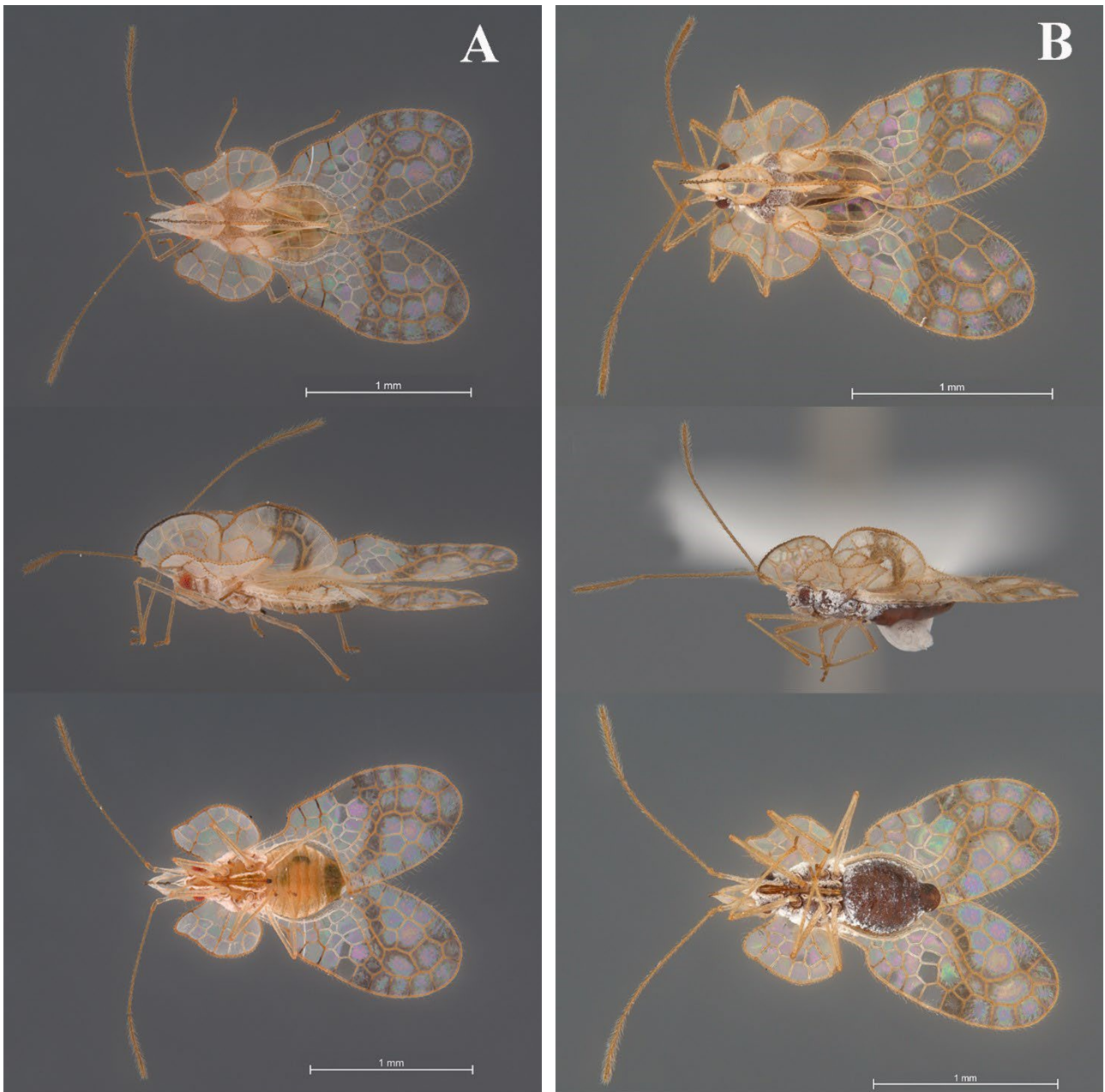


Fig. 1. Dorsal (top), lateral (middle) and ventral (bottom) views of *Stephanitis kardia* from the Singapore Botanic Gardens. A. Adult female (ZRC\_BDP0373002). B. Adult male (ZRC\_BDP0373625). Scale = 1 mm (Photographs by: Yap Ee Hean).



Fig. 2. Dorsal (left), lateral (middle) and ventral (right) views of a *Stephanitis kardia* nymph (ZRC\_BDP0373007) from the Singapore Botanic Gardens. Scale = 0.5 mm (Photographs by: Yap Ee Hean).

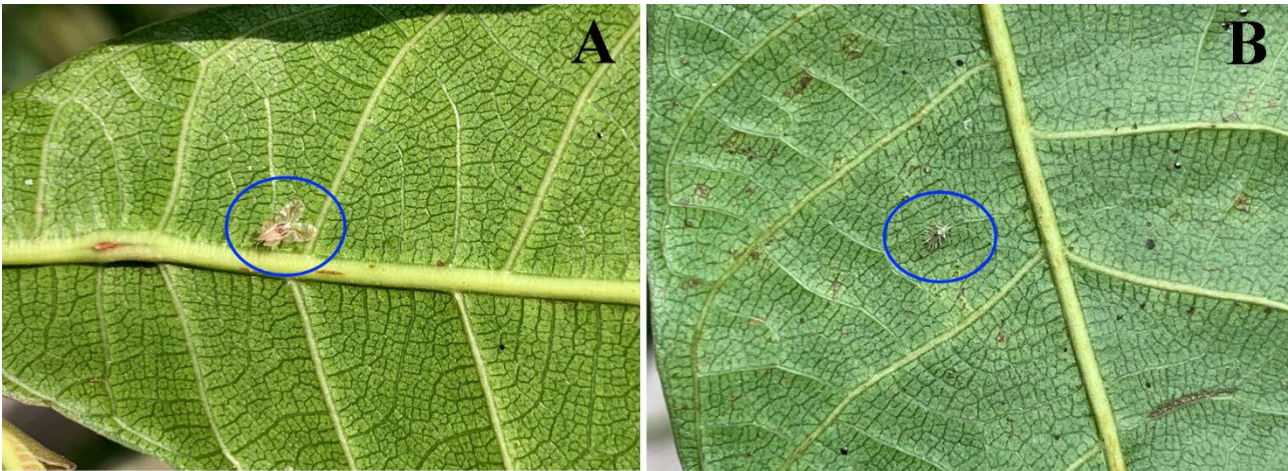


Fig. 3. In-situ images of *Stephanitis kardia* (circled in blue) under the leaves of *Sloetia elongata*. A. An adult. B. A nymph. Brownish faecal matter can be seen on abaxial side of the leaves, a sign of the bugs feeding (Photographs by: Yap Ee Hean).



Fig. 4. The host plant, *Sloetia elongata*, with close-up views of the foliage (Photographs by: Yap Ee Hean).

**Acknowledgement:** We would like to thank Dr Hwang Wei Song of the Lee Kong Chian Natural History Museum for verifying the identity of the lace bug, and for providing helpful suggestions in the writing of this record

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