

## Sycamore lace bug

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The Sycamore lace bug (SLB) *Corythucha ciliata* (Say) (Tingidae: Hemiptera) is a native North American pest of plane trees (also called Sycamore trees), introduced into NSW probably during 2006. SLB prefers to feed on plane trees (*Platanus* spp. especially *Platanus occidentalis* L.) (Platanaceae). At the time of writing, the infestation centres on the Sydney basin – but will eventually become more widespread. This pest is a relative of other lace bugs, such as the azalea lace bug and the olive lace bug, which are familiar to many gardeners. The damage SLB causes is also similar to that caused by other lace bugs, with adults and nymphs feeding on the underside of leaves. This initially causes white stippling, progressing to bronzing, chlorosis and, eventually, premature leaf drop. Severe infestation in late summer can even cause defoliation. Such damage to plane trees in Sydney has been worsened by the stress caused by drought conditions (Figure 4). In North America, outbreaks often coincide with drier spring conditions (Filer et al 1977), and several consecutive years of heavy infestation may kill trees (Barnard & Dixon 1983).

This pest was introduced to Europe during the 1960s. It has since become widespread, and is now a major nuisance there, with clients of outdoor cafes and bars often being bothered by these bugs as they sit in the shade of local plane trees (d'Aguiar et al 1977).

### Adults

Adults (Figures 1 & 3) are white in colour and about 3 mm long. Like other lace bugs, the scalloped dorsal ornamentation is characteristic. They are recorded almost exclusively on *P. occidentalis* (Drake and Ruhoff 1965), but have also frequently been found on primary hybrids of *P. occidentalis* and *P. orientalis* – commonly used as shade trees in Sydney.

Although Maceljski (1986) records that adult SLBs 'are good fliers', observations of these and most other lace bugs show that, in almost all situations, they prefer to walk rather than fly.



Figure 1. Adult Sycamore lace bug (Scale bar = 1mm)

## Immatures

Nymphs (Figure 2) are often found in the company of adults. They are smaller, usually with dark- and light-coloured bands. They emerge to feed in the immediate proximity of where the eggs are laid, usually venturing only far enough to find fresh food. Cast skins are often left on the underside of leaves, giving the impression that the population is larger than it actually is.

## Life history

Details of the life history of SLB were recorded by Wade in 1917. He stated that mated pairs initiated colonies by laying eggs along leaf veins, typically near forks. A single female may lay 250–350 eggs (Wade 1917; d'Aguilar et al 1977). Wade (1917) counted five immature instars, and found that in summer in Oklahoma (53.7°N), a single life cycle is completed in 43–45 days. In warmer conditions, however, it is likely that several life cycles may occur, each in a shorter period of time. Wade also found that adults spent the winter under loose bark or in cracks and crevices, and that they could tolerate temperatures as low as -10 °C.

A number of authors have concluded that the majority of the pest's long distance distribution has resulted from human activity. In North America, SLB has also occasionally been recorded on other hosts (see Halbert & Meeker 2001).

## Management

A number of fungal pathogens and parasites have been recorded for SLB in North America, but these appear to have little impact (Halbert & Meeker 2001). Insecticides have also been used in North America in a variety of applications, such as foliar sprays, soil treatments and systemic injections; however, the cost of such treatments appears very high in relation to their effectiveness (Halbert & Meeker 2001). Furthermore, the common use of *Platanus* spp. as an urban shade tree in NSW will likely rule out insecticides as an effective management tool for this pest.



Figure 2. Nymph Sycamore lace bug (Scale bar = 1mm)



Figure 3. Sycamore lace bug – adult and nymph habitus (Scale bar = 1mm)



Figure 4. Sycamore lace bug – damage to plane tree in Sydney

Wade, O. 1917. The sycamore lace-bug (*Corythucha ciliata*, Say). Oklahoma Agricultural Experiment Station Bulletin No. 116. 16pp.

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