

North American lace bug is a vector of Australian fungus in Japan

Kazushi Kikuchi^a, Hayato Masuya^b and Hisashi Kajimura^a

^a Graduate School of Bioagricultural Sciences, Nagoya University, JAPAN

^b Forest Microbiology, Forestry and Forest Products Research Institute, JAPAN

Sycamore lace bug (*Corythucha ciliata* Say) is a sucking insect native to North America. Recently, it invades Europe (Italy, Austria, Bulgaria etc.), Asia (Japan, Korea, China), South America (Chile), causing leaf bleaching in plane trees (*Platanus* spp.). In northern part of Italy, it has a potential of transmitting two fungal species (*Ceratocystis fimbriata* Ellis and Halst, *Apiognomonina veneta* (Sacc. and Speg.) Hohn) which cause wilting and death of the trees. This novel risk may occur in other countries. However, few studies have reported the lace bug-associated fungi to make a risk assessment. Therefore, we have isolated fungi from Japanese *C. ciliata* populations (surface and contents of the body in nymph and adult), and compared flora between sampling sites.

We collected the lace bug on the *Platanus* leaves from 5 sites, Nagoya (Nishi Ward, Naka Ward, Minato Ward), Kyoto and Matsumoto. We identified fungal isolates using morphological characteristics and sequence data (LSU-rDNA, D1/D2 region).

A total of 38 fungal species were detected in this study. *Cladosporium* spp., *Penicillium* spp., *Aureobasidium pullulans* Mokrousov and Bulast and *Leptosphaerulina* spp. were the commonly isolated species. We have not found the two phytopathogenic fungi (*C. fimbriata*, *A. veneta*), but have discovered a species of the genus *Quambalaria* including pathogens to *Eucalyptus* trees. *Quambalaria* sp. was isolated from all the sampling sites in both nymph and adult. These results suggest that the Australian fungus was introduced into Japan, the North hemisphere, and has been distributed extensively thought the wide-spreading epidemic of the lace bug.

Corresponding Author:

Kazushi Kikuchi

Graduate School of Bioagricultural Sciences, Nagoya University

Chikusa, Nagoya, Aichi 464-8601, JAPAN

e-mail: kikuchi.kazushi@h.mbox.nagoya-u.ac.jp