

RESEARCH DIRECTIONS

Western Sydney insect infestation

Dr Markus Riegler from the Hawkesbury Institute for the Environment, together with Blacktown City Council have been awarded a UWS Research Partnership grant to identify the key characteristics of the current psyllid infestation in the endangered remnant Cumberland Plain Woodlands.

'Eucalypts in the endangered remnant Cumberland Plain Woodlands throughout Western Sydney are currently experiencing massive infestation by lace lerp insects, Australian native insects in the family of Psyllidae (Hemiptera),' explains Dr Riegler. 'In large numbers, these insects cause defoliation through their plant sap feeding activity on leaves and repeated infestations is likely to also result in tree mortality. Information about the population dynamics of the current psyllid infestation will be collected in the affected woodlands of Western Sydney, in particular of the Blacktown City Council, in order to predict future development and to help with design of management strategies.'

The research team will first assess the geographic expansion of the infestation using vegetation maps and climatic events that have occurred in the region over the last 5 years. We will identify and characterise the lace lerp species and study life history traits such as developmental times, reproductive potential and number of generations per year. We will test the host plant specificity on the Grey Box, *Eucalyptus moluccana*, measure plant physiological and biochemical traits in order to obtain an understanding of their stress status. We will look for variation in lace lerp population densities between individual trees within and between stands with different canopy cover and understorey.



The research will provide information about the lace lerp outbreak and the monitoring data obtained will be used to test different management options for the recovery of lands affected by lace lerp.

Project Title: Assessing the distribution and population dynamics of the lace lerp infestation in the endangered Cumberland Plain Woodlands in Western Sydney

Funding has been set at: \$24,000

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<http://www.uws.edu.au/hie>

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