Monterey Pine Aphid: Essigella californica

Range

The Monterey Pine Aphid is a native of North America, its distribution ranges from southern British Columbia in the north to southern Mexico, it eastern range extends to Nebraska, it is also found as far south as Florida in the southeast. It is a recent introduction to Europe and has been identified in both France and Spain; it has also been identified in New Zealand and Southern Brazil. The Monterey Pine Aphid was first recorded in Australia in March 1998 on Pinus Radiata near Canberra; it is now present in all areas across Australia were pine trees are grown.



An adult Monterey Pine Aphid on a pine needle, aphids inflict damage by extracting the sugary sap with their Stylets (mouth parts), this weakens and desiccates the foliage. Reference image SARDI

Symptoms

The insect is typical of aphids in its damage to plant tissue, infestations cause browning and the defoliation of pine needles, this weakens the tree. Monterey Pine Aphid infestations are more frequent in drier years; it is also the cause of substantial losses to the plantation industry.



Monterey Pine Aphid Needle damage to Pinus Canariensis at the UM Gardens at Burnley Campus.

Treatment Options

Elmsavers in treating this insect pest in susceptible pinus species by tree injection. We have treated the Canary Island Pines within the gardens at the Burnley Campus, which is a part of The University Melbourne. Tree injection using Neonicotinyls is the most effective method; it can be undertaken throughout the year offering long term control in resinous coniferous trees.



Before: Treatment, September 18th 2009 using trunk injection as the method of delivery (Images Steve Parton Elmsavers)

After: March 3rd 2010 Improvement with new growth good leaf colour and increased vigour. (Images Steve Parton Elmsavers)



Healthy and vigorous, image is of the top of canopy near the three peaks; align with the image taken on March 3rd 2010 or at the symptomatic stage on September 18th 2009 on Page One.

Susceptible Species

Common Name	Botanical Name	Origin
Monterey Pine	P.radiata	North America
Eastern White Pine	P.strobus	North America
Canary Island Pine	P.canariensis	Canary Islands
Cluster Pine	P.pinaster	Western Europe
Bishop Pine	P.muricata	North America
Michoacan Pine	P.michoacana	North America
Montezuma Pine	P.montezumae	North America
Stone Pine	P.pinea	North America
Mexican Weeping Pine	P.patula	North America
Douglas Fir	Psuedotsuga menziesii	North America

Note: MPA has a very wide host range, the reference table above refers to host susceptibility data from the New Zealand Plant Protection Society. This document will be continually updated with new host species.

References and acknowledgements & Links

University of Melbourne Burnley Gardens : Andrew Smith.

SARDI for Data and Images.

http://www.sardi.sa.gov.au/pestsdiseases/pests/biological_control/monterey_pine_aphid

Host Susceptibility: New Zealand Plant Protection Society (Inc.) www.nzpps.org

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