

About Ash Whitefly

(Siphoninus phillyae)



This small white sap sucking insect is causing leaf damage in Golden and Claret Ash trees; it is rapidly becoming established in temperate areas of south eastern Australia.

First recorded in Adelaide in the autumn of 1998, by June 1998 it was also present in Wagga Wagga, Dubbo, Griffith, Gundagai and Canberra. It has been present in Melbourne since 2003 and possibly earlier, by 2006 it has also been reported on Golden Ash in Bendigo and Mansfield.



Ash Whitefly Eggs
images by G. Baker (SARDI)



Adult Ash whitefly, Nymphs & Pupae (SARDI)



Ash Whitefly Close up on Golden Ash leaf



Ash Whitefly Close up Claret Ash leaf

Identification

Both common greenhouse whitefly and ash whitefly are very close in appearance and are difficult to distinguish. Both are white insects 1mm to 2mm, winged and mobile to a lesser degree, preferring to remain sedentary on the underside of the host's leaves.

Ash Whitefly and Greenhouse whiteflies have separate hosts; this knowledge is a useful tool in determining species. When disturbed whiteflies of both species form dense clouds around the host.

The Ash Whitefly is a nuisance in urban areas it is often inhaled by pedestrians its "Honeydew" is often seen covering vehicles and other outdoor amenities. Other indicators are increased ant and European wasp activity as these insects seek honey dew.

Lifecycle

Ash whitefly reproduces rapidly during the warmer months with up to three generations per season that sometimes overlap. Lifecycle is three phase post egg, nymph, pupae and adult with the nymph stage separated by four instars.

The adults deposit their eggs on the underside of the leaf which subsequently hatch into nymphs, during this stage they go through four instars or moult phases. The nymphs eventually change into the pupae' stage that is stationary or fixed to a single position, adults eventually emerge completing three lifecycle stages. Favoured hosts in spring, summer and autumn are the deciduous ash, pear, apple and pomegranate. In autumn, when these trees loose their leaves swarms of adult whiteflies can be seen moving to their winter hosts. Citrus and other non-deciduous trees (olive and photinia) make up the winter hosts. Development in winter is very slow with little occurring below 10°C but it is this overwintering population that leads to large infestations early in the season.

Ash whitefly will only develop on leaves. There is no evidence that it can develop on fruit.

Early Symptoms and Damage

Heavy infestations of ash whitefly will cause stress to trees and lead to defoliation, tip wilting. The growth of sooty mould as seen below is a secondary fungal response to *Honey Dew* secretions.

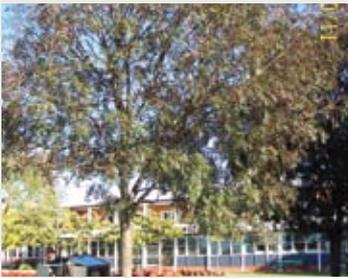


Excessive European wasp activity is a good indicator of Ash Whitefly infestation

Control

Tree injection using newer third generation neonicotinyls insecticides such as Clothianidin are most effective. Insecticidal resistance is now occurring in old first generation neonicotinyls such as imidacloprid, also known as Confidor® or its tree injectable equivalent SilvaShield®.

Our treatments offer two or more years of protection with insect drop within thirty six hours post treatment. Canopy spraying is another option but is less cost effective than tree injection, spraying near Schools, Public Housing or Nursing Homes require Prior Notification to residents etc.



Claret Ash post treatment completed at 4-34pm



Ash Whitefly dead on sleeper box three days later



Luther College, close up of foliage at treatment



Canopy thinning and partial defoliation



Luther College at treatment April 11th 2007



Update March 11th 2008 healthy & full canopy

Long Term Results from Treatment

This Golden Ash is located approximately 600 meters from the Luther College trees, it was trunk injected on March 4th 2006 due to a heavy infestation of ash whitefly. Treatments such as this are effective for two or more years.



Treatment in Progress

Elmsavers treats both private and municipal trees using only tree injection, its reliable results and reduced environmental risk are preferred by councils, schools and government authorities.



Host range of Ash whitefly

Ash Whitefly, *Siphoninus phillyae* (Haliday)

Family	Species	Common Name
Bignoniaceae	<i>Catalpa x Chilopsis</i>	Catalpa hybrid
Fabaceae	<i>Azalia sp.</i>	Pod mahogany*
	<i>Cercis occidentalis</i>	Western Redbud
	<i>Cercis siliquastrum</i>	Judas tree
Lythraceae	<i>Lagerstroemia indica</i>	Crape myrtle
Magnoliaceae	<i>Liriodendron tulipifera</i>	Tulip tree
	<i>Magnolia stellata</i>	Star magnolia
Oleaceae	<i>Fraxinus excelsior</i>	Ash*
	<i>Fraxinus kofolia</i>	Oregon ash*
	<i>Fraxinus ornus</i>	Ash*
	<i>Fraxinus syriaca</i>	Shame ash*
	<i>Fraxinus uhdei</i> "Tomlinson	Tomlinson ash*
	<i>Fraxinus velutina</i> "Modesto	Modesto ash*
	<i>Fraxinus velutina var. glabra</i>	Arizona ash*
	<i>Fraxinus velutina var. coriacea</i>	Western ash*
	<i>Ligustrum spp.</i>	Privet
	<i>Olea chrysophylla</i>	Wild olive*
	<i>Olea europea</i>	Common olive*
	<i>Phillyrea 1atifolia</i>	Phillyrea*
	<i>Phillyrea media</i>	Phillyrea*
	<i>Syringa hyacinthiflora</i>	Common lilac
	<i>Syringa laciniata</i>	Cut-leaf lilac
	<i>Syringa vulgaris</i>	Common lilac

Host range of Ash whitefly (cont.)

Ash Whitefly. *Siphoninus phillyae* (Haliday)

Family	Species	Common Name
Punicaceae	<i>Punica granatum</i>	Pomegranate*
Rhamnaceae	<i>Rhamnus alaternus</i>	Buckthorn*
	<i>Zizyphus spina-christi</i>	Crown of thorns*
Rosaceae	<i>Amelanchier</i>	Service berry
	<i>Chaenomeles speciosa</i>	Flowering quince
	<i>Crataegus mollis</i>	Hawthorn*
	<i>Crataegus monogyna</i>	Hawthorn*
	<i>Crataegus oxyacantha</i>	Hawthorn*
	<i>Cydonia oblonga</i>	Quince*
	<i>Eriobotrya deflexa</i>	Golden loquat
	<i>Heteromeles arbutifolia</i>	California Christmas berry
	<i>Malus domestica</i>	Apple*
	<i>Malus floribunda</i>	Japanese flowering crabapple*
	<i>Malus fusca</i>	Oregon crabapple*
	<i>Malus spp.</i>	Other species of crabapple*
	<i>Mesplius sp.</i>	
	<i>Prunus armeniaca</i>	Apricot*
	<i>Prunus blireiana</i>	Blue plum hybrid*
	<i>Prunus persica</i>	Peach*
	<i>Prunus salicina</i>	Santa Rosa plum*
	<i>Prunus virginiana var. melanocarpa</i>	Choke berry*
	<i>Pyracantha sp.</i>	
	<i>Pyrus calleryana</i>	Ornamental pear*
<i>Pyrus communis</i>	Pear*	
<i>Pyrus kawakamii</i>	Flowering pear*	
<i>Pyrus pyrifolia</i>	Japanese sand pear*	
<i>Pyrus sativa</i>		
<i>Photinia</i>		
Rubiaceae	<i>Cephalanthus occidentalis var. californicus</i>	Buttonbush
Rutaceae	<i>Citrus sp.</i>	Tangerine
	<i>Citrus limon</i>	Lemon
	<i>Citrus sinensis</i>	Navel and valencia orange
	<i>Fortunella sp.</i>	Kumquat

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