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White cedar moth — a serious pest of Cape lilac trees

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Introduction

The caterpillars of the white cedar moth (*Leptocneria reducta*) have become a serious pest of Cape lilac trees over the last few years. Their voracious appetite can leave even the largest trees completely stripped of leaves. This hairy grub has also become a public nuisance of some note by invading homes, cars and outbuildings. There is also a public health issue as many people suffer skin reactions on contact with the caterpillar's hairs. While total control is not possible, there are a number of cheap, practical and relatively safe control measures that can be employed to reduce pest numbers to a tolerable level.

Because this pest is not declared as either an environmental or an agricultural pest, the Department of Agriculture is not able to be involved in its control but we can assist with advice, and this note aims to give some practical information on the pest and its control.

Regularly check your tree and commence control measures at the first sign of activity.

Background

The Cape lilac we have in Western Australia is *Melia azedarach*, which originated in the Himalaya region. Overseas it is called Chinaberry or White cedar. It is closely related to the Australian form, *Melia azedarach* var. *australasica*, a native of New South Wales, Queensland and New Guinea, where it is more often called White cedar. They are tough trees, and even complete defoliation should only cause temporary stress, not death.

The tree establishes very easily from seed, enabling young plants to be dug up and given to friends. Parrots also spread seeds, so many trees are chance seedlings. Because of this, the Cape lilac could almost be considered a naturalised species. Most people are aware that the berries are extremely toxic, yet parrots seem immune. The leaf, bark and flowers are also poisonous, and smoke from burning wood contains toxic fumes.

Recent history

White cedar moths have become endemic over the past several years, with the Perth metropolitan area being the worst affected because of the high number and close proximity of Cape lilac trees. However, many residents are facing the pest for the first time, and the Department of Agriculture receives hundreds of calls each year.

The caterpillars tend to be particularly bad for one or two seasons until people become aware of them and discover how effective simple control measures are. The pests also move on to new areas searching for fresh sources of feed. This reduction in numbers in a given area may last two years or more, then the pest will probably return in nuisance numbers.

Regrettably, many people are being given poor advice on how to control them, even to the extent of being told not to do anything; but if no control is put in place, the problem could get worse, at least in the short term. Even minor control efforts should have some influence on the problem and control costs little more than $5 per tree per year. Many people have removed the trees in despair, which is unfortunate as hardy shade trees are a great asset.

White cedar moth — description, life cycle and control

Description and life cycle

The adult moth is grey-brown with a wingspan of over 40 mm and black hairs covering the body. It lays greyish coloured eggs in neat clusters, usually on the tree or in woodpiles, but in other places as well, including under shade cloth and behind curtains. It is mostly active at night.

Eggs hatch as brown-black hairy caterpillars with a faint yellow body stripe. They quickly grow up to 40 mm long, feeding at night and only on Cape lilac trees. They are sensitive to sunlight and while small hide under bark and in hollows of the tree, usually on the southern side.

As they get larger, they come to ground at dawn, either by crawling down the trunk or by dropping down on a fine web, to hide from the sun, to look for other trees to attack, or to pupate and emerge later as the adult moth.

The caterpillars move quickly, and can cover 60 to 80 metres or more in a short time. Many will return to the tree at dusk or just after, crawling up the trunk to feed on the leaves. This daily movement up and down the tree can continue for a week or more.

Caterpillars are active during the warmer months, and there can be from three to five generations, five to six weeks apart. Activity generally starts in October through to December, but it can begin as early as mid September. For this reason we strongly suggest that **control treatments should start in early October**; or at least owners of trees should monitor for the pest weekly and employ control measures at the first sign of activity. Pest activity can be assessed by going out after dusk and shining a torch up into the canopy of the tree.

Control

Most insect pests are more effectively controlled early in their life cycle, and the white cedar moth is no exception. There are three areas of control.

Trunk banding

Loosely roll up some material such as hessian, curtain material or even shade cloth, and tie it around the trunk of the tree to form a band or collar. Sprinkle carbaryl dust (available in products such as Cabbage Dust® or Flower Dust®) onto this band. These dusts can also be applied to the trunk and around the base of the tree. Caterpillars crawling up or down the trunk will contact the chemical, especially those crawling into the band to hide during the day. The first application of dust should be quite heavy, then lightly topped up every three weeks, or after rain. Maintain treatments until the onset of winter. Carbaryl dusts are of low mammalian toxicity, but avoid areas where children play or pets lie.

Contact spraying

The caterpillars can be sprayed directly with any quality garden insecticide such as carbaryl, maldison or trichlorfon, and even pyrethrin-based products. Pyrethroids such as bifenthrin and cyfluthrin are also very effective. To achieve good control, it is important to mix the chemical at the strongest label rate. Also, add extra wetting agent to the mixture otherwise it may not penetrate the hairy body. Use household detergent at up to 10 mL per litre. Spraying is best done at dawn or at dusk when the caterpillars are grouping and moving together. The butts of the trees and/or the fenceline can be sprayed; as well, areas where the pest is known to hide during the day, such as leaf litter, woodpiles, compost bins, patios and under fence-capping, can be sprayed with care.

Other measures

Chemical spray treatment of the Cape lilac trees is usually impractical because of the size of the trees and the risk of spray drift. Organic preparations such as Dipel® applied to the leaves of smaller trees may have some effect on younger caterpillars.

Quality surface sprays applied inside the home and around doorways and windows to prevent caterpillars coming inside can have some effect, albeit slow, as can applying carbaryl dusts along fencelines and around patios and other entry points.

Further information

Detailed images of the White cedar moth can be viewed at the NSW webpage: http://www-staff.mcs.uts.edu.au/~don/larvae/lyma/reducta.html

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