

What distinguishes the region north of the Bombay Hills besides Sky Tower and the Americas Cup? Answer: three potentially serious exotic moth pests that are currently causing concern in the Auckland urban area. Two of these feature in this month's *Forest Health News*, the gum leaf skeletoniser (*Uraba lugens*) and the newly discovered fall webworm (*Hyphantria cunea*). With the publicity surrounding these incursions, as well as the operation to eradicate painted apple moth (*Teia anartoides*, *FHNews* 116:1, 119:2), it is easy to forget the cost-efficient programme, Operation Evergreen, that successfully eradicated the white-spotted tussock moth (*Orgyia thyellina*) in Auckland's eastern suburbs during the period 1996-1998<sup>1</sup>. This month's *Forest Health News* announces the release of a review of this programme, which evaluates the way the campaign proceeded, in order to ensure an optimum response to yet other possible incursions of unwanted exotic pests such as Asian gypsy moth (*Lymantria dispar*). This issue also includes an item on Melbourne's elms, and the usual list of new records.

<sup>1</sup>The course of the campaign, from discovery to eradication, is documented in *FHNews* 53:1-2,3; 54: 1-2; 56:1; 60:1; 63:2; 65:4; 71:1; 72:1-3; 75:1; 76:1.

#### • WHITE-SPOTTED TUSSOCK MOTH RESPONSE - HOW GOOD WAS IT?

A full account of the eradication programme for white-spotted tussock moth was recently published and is now available in the public domain<sup>1</sup>. Subsequent to this, Forest Research's Forest Health Group has just released a review of the programme, in order to compare the actual response with currently accepted "best practice". This report draws on the extensive documentation that accumulated during the campaign, together with the personal experience of those involved. The six stages making up the programme, detection, evaluation, response, decision-making, operations, and monitoring and review, are broken down into their components, and each section is rated out of 10. The review also summarises the lessons learnt, in order to enable an even better incursion response in the future. The work was funded as part of the Forest Health and Biosecurity FRST programme and the report is available both electronically and in hard copy by contacting Rose O'Brien (rose.o'brien@forestresearch.co.nz).

(Gordon Hosking, Forest Research)

<sup>1</sup>Hosking, G.; Clearwater, J.; Handiside, J.; Kay, M.; Ray, J., and Simmons, N. (2003): Tussock moth eradication – a success story from New Zealand. *International Journal of Pest Management* 49 (1): 17-24 (Jan.-March 2003).

#### • FALL WEBWORM IN NEW ZEALAND

Caterpillars provisionally identified as belonging to the fall webworm (*Hyphantria cunea*) were found at an Aranui Street property, Mount Wellington, Auckland, as a result of a public enquiry on 19 March. Specimens and images have been sent to the United States Department of Agriculture for validation. An inspection of neighbouring properties revealed more live hairy caterpillars and the characteristic silken web spun over the foliage of a single tree. Native to North America and Mexico, the fall webworm is also present in Asia and Europe. This insect feeds on a range of shade trees and ornamentals such as cherries, mulberry, dogwoods, sycamores, persimmons, poplar, aspens, willows, white birch, apple, and liquidamber, but it is not regarded as a serious pest in either the US or Europe.



White-spotted tussock moth, in the days when it could still be found in New Zealand.



The comparatively low budget aerial spraying operation that successfully eradicated white-spotted tussock moth two years after its discovery in Auckland in April 1996.

Pesticide has been applied to infested and adjacent host trees, and with the completion of an investigation report, the Ministry of Agriculture and Forestry (MAF) is conducting delimiting surveys, deploying insect traps, and undertaking testing for host species susceptibility. MAF is encouraging members of the public to report any suspicious finds to their hotline phone number 0800 809 966.

(From a MAF press release, 25 March 2003).

#### • URABA CONSOLIDATES ITS POSITION

In December *Forest Health News* reported progress on the MAF campaign to eradicate the gum leaf skeletoniser (*Uraba lugens*) from Mount Maunganui and Auckland (*FHNews* 125:1). This campaign has recently suffered a setback with the discovery of caterpillars over a wide area of south Auckland. A delimitation survey by Vigil and Agriquality has extended the known range to a zone stretching from St Heliers and Howick to Manurewa, Onehunga, and Auckland Airport. In the Mangere area, heavy infestations have been found in parks and at roadsides, on eucalypt trees belonging to species such as *Eucalyptus viminalis* and *E. nicholii*, as well as on the related *Lophostemon confertus*. Contact with the hairy caterpillars can cause significant skin irritation, so pesticides have been applied to some infested park trees where people may be at risk.

MAF Biosecurity Authority is currently gathering information, and conducting a cost-benefit analysis of the potential impact this insect may have on eucalypt plantations, in order to determine the most appropriate course of action. In its native Australia, outbreaks of *Uraba* tend to be sporadic in mixed species woodlands, and it is unclear how it may behave in single-species stands in a new environment free from its natural enemies. MAF intends to explore different control options. Appropriate research is also being initiated, and HortResearch is testing blends of a potential sex pheromone to find a lure for use in the infested area. *Uraba lugens* feeds on a wide range of *Eucalyptus* species belonging to all major subgenera. Forest Research is undertaking a programme to test the susceptibilities of 11 native myrtaceous tree species, including rata, pohutukawa, manuka and kanuka. The potential impact of this pest on indigenous forest is of concern, and Forest and Bird has publicly welcomed the decision of MAF Biosecurity Authority to determine whether *Uraba* is likely to feed on any native trees.

(Toni Withers and Vigil, Forest Research)

#### • VICTORIA'S SEE-THROUGH ELMS

Victoria has the greatest number of elms in Australia. In Melbourne these trees form the main structural plantings in streets and parks. Their summer shade is welcome when temperatures soar above 34 degrees and hot winds carry red desert dusts. Large golden elms (*Ulmus glabra* 'lutescens') are a landscape feature of private gardens north to the Yarra Valley. However, the most numerous species, which is commonly called English elm (*U. procera*<sup>1</sup>), was planted as early as 1850 in long avenues according to the English school of landscaping.

It is not hard to see why Victorians are concerned about Dutch elm disease and have contingency plans at the ready in case it arrives. Their elms generally appear remarkably healthy, with no sign of the crown dieback so commonly seen in green-crowned elms in Auckland. This situation has unfortunately been threatened with the discovery of the European elm leaf beetle (*Pyrrhalta luteola*) close to Melbourne in 1989. The major damage from this pest is caused by the prominent slug-like larvae, which severely skeletonise the foliage. Some measure of control is achieved by treatment with insecticides such as carbaryl, and by applying a band of sticky gel to the tree trunk to trap larvae as they move down the tree trunk to pupate<sup>1</sup>. A derivative of *Bacillus thuringiensis* (Bt) is also effective. Nevertheless, this insect is a pernicious pest, which threatens to "exhaust" the elms as new leaves are continually rendered "see-through" and ineffective for growth.



Golden elm leaves being skeletonised by elm leaf beetle larvae. Royal Botanic Gardens, Melbourne, December 2002 (C. Inglis).

Should this pest reach New Zealand, early detection is likely. Auckland has a very active Dutch elm disease eradication programme, with all known elms being inspected three times each summer (*FHN*125: 1). It is probable that any elm leaf beetle larvae would be quickly spotted and rapidly dealt with.

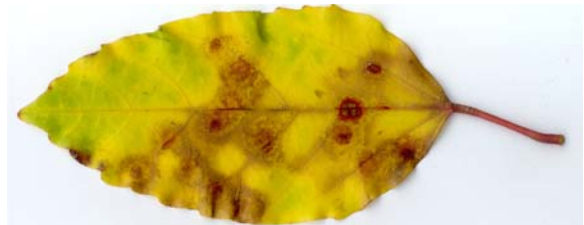
(Chris Inglis, Vigil)

<sup>1</sup>Spencer, R.; Hawker, J.; Lumley, P. (1991): Elms in Australia, Royal Botanic Gardens, Melbourne. These authors draw attention to the complexities encountered in determining the true identities of some of Victoria's elms.

#### • NEW RECORDS

The following records reported by the Forest Health Reference Laboratory (*Forest Research*) result from a general surveillance programme comprising public enquires, and small block and risk site surveys, funded by the Ministry of Agriculture and Forestry. Members of the public are encouraged to submit to this laboratory any samples of pests or pest damage on trees or shrubs that they suspect might be new to New Zealand. This is a free service funded by Ministry of Agriculture and Forestry for the detection of new pest introductions.

**New to New Zealand – Fungus: *Microthyriella hibisci*; Bioregion:** Gisborne; **Host:** *Hibiscus* sp., probably *rosa-sinensis* cultivar; **Coll:** B Rogan, 3 December 2002; **Ident:** G Ridley, 28/2/03; **Comments:** Apart from the original description very little has been written about this fungus. No deleterious effects have been noted and it would appear that it is of little significance. In Gisborne it was associated with small black specks on the leaf.



#### *Microthyriella hibisci* on leaf of *Hibiscus* sp. in Gisborne

**Extension to known distribution – Insect: *Nematus oligospilus*;** **Bioregion:** Nelson; **Host:** *Salix ?alba*; **Coll:** B Doherty, 25/2/2003; **Ident:** R Crabtree, 26/2/03; **Comments:** This is the first record of this species from Nelson.

**Extension to known distribution – Insect: *Dicranosterna semipunctata*;** **Bioregion:** Northland; **Coll:** D Bartram, 3/3/2003; **Ident:** R Crabtree, 5/3/2003; **Comments:** An Australian species first found in NZ in 1996; this is the first record from Northland, previously recorded from Auckland, Waikato, Bay of Plenty and Coromandel. Two adults found.

**Extension to known distribution – Insect: *Ochrosopsis subfasciatus* sp.;** **Bioregion:** Taupo; **Host:** *Eucalyptus nitens*; **Coll:** J Bartram, 4/3/2003; **Ident:** R Crabtree, 12/3/2003; **Comments:** This extends the range of this Australian chrysomelid to the south.

**Extension to known distribution – Insect: *Nematus oligospilus*;** **Bioregion:** Buller; **Host:** *Salix ?fragilis*; **Coll:** B Doherty, 7/3/2003; **Ident:** R Crabtree, 1/3/2003; **Comments:** Recorded from both North and South Islands but this is first record from Buller.

**Extension to known distribution and new host record for New Zealand– Insect: *Essigella californica*;** **Bioregion:** Mackenzie; **Host:** *Pinus nigra*; **Coll:** P Bradbury, 6/3/2003; **Ident:** R Crabtree, 11/3/2003; **Comments:** This is the first record of this aphid from *P. nigra* and a new distribution record.

**New host record for New Zealand – Insect: *Uraba lugens*;** **Bioregion:** Auckland; **Host:** *Eucalyptus bosistoana*; **Coll:** C Inglis, 4/3/2003; **Ident:** J Bain, 11/3/2003; **Comments:** Another addition to an already long host list.

**New host record for New Zealand – Insect: *Uraba lugens*;** **Bioregion:** Auckland; **Host:** *Eucalyptus brookeriana*; **Coll:** C Inglis, 26/2/2003; **Ident:** J Bain, 5/3/2003; **Comments:** Another addition to an already long host list.

**New host record for New Zealand – Insect: *Uraba lugens*;** **Bioregion:** Auckland; **Host:** *Eucalyptus rubida*; **Coll:** C Inglis, 7/3/2003; **Ident:** R Crabtree, 12/3/2003; **Comments:** See above.

**New host record for New Zealand – Insect: *Uraba lugens*;** **Bioregion:** Auckland; **Host:** *Eucalyptus pauciflora*; **Coll:** C Inglis, 14/3/2003; **Ident:** J Bain, 18/3/2003; **Comments:** See above. *U. lugens* is now widespread in south Auckland.

**New host record for New Zealand – Insect: *Uraba lugens*;** **Bioregion:** Auckland; **Host:** *Eucalyptus cladocalyx*; **Coll:** C Inglis, 18/2/2003; **Ident:** J Bain, 21/2/2003; **Comments:** See above.

**New host record for New Zealand – Fungus: *Kuehneola uredinis*;** **Bioregion:** Wellington; **Host:** *Rubus phoenicolasius*; **Coll:** B Rogan; **Ident:** M Dick; **Comments:** This rust species has been recorded from a number of species *Rubus* in many parts of New Zealand.

(John Bain, Forest Research)