

EUCALYPTUS VARIEGATED BEETLE MARCHING ON

Last summer, the Australian pest *Paropsisterna variicollis*, usually called the eucalyptus variegated beetle (EVB) in New Zealand, was known to be infesting an area from Te Pohue in the north of Hawke's Bay, to Te Mata Peak and the Tukituki Valley in the south (FH News 269, August 2016). Now EVB seems to be flourishing in the region, developing larger populations and spreading. Beetles have been reproducing from at least the first week of October right through until May.

Field investigations by University of Canterbury student Huimin Lin have shown extensive beetle browsing damage in *Eucalyptus bosistoana*, *E. tricarpa*, *E. quadrangulata*, and to a lesser extent in *E. cladocalyx* (all *Symphymyrtus*, the largest of the seven *Eucalyptus* subgenera). In some cases however, it was not possible to ascertain exactly which paropsine beetles (*Trachymela sloanei*, *Paropsis charybdis*, or *Paropsisterna variicollis*) were responsible for the missing leaves. *E. globoidea*, which belongs to the *Monocalyptus* subgenus, seemed to be relatively free of damage. This is reassuring news for durable eucalypt growers and the New Zealand Drylands Forest Initiative (NZDFI).

EVB is known to have spread out of Hawke's Bay as far south as Woodville at the eastern end of the Manawatu Gorge. We expect to see a fairly rapid dispersal from now on, recorded by the public, farmers and scientists alike, on the "eucalyptus leaf beetles" project, available on the Nature Watch website (naturewatch.org.nz/projects/eucalyptus-leaf-beetles-nz).

Research from Australia has shown that egg parasitoids *Enoggera nassau* and *Neopolycystus insectifurax*, which are already established in New Zealand, can also act as biological control agents for EVB. These species are predicted to have a lower propensity to attack *Paropsisterna variicollis*, compared with *Paropsis charybdis*, but this still needs to be verified by field sampling and/or laboratory research.

Predators may also play a role in regulating newly established EVB populations. The ladybird *Cleobora mellyi* was successfully introduced in 2013 to control psyllids and tortoise beetles on eucalypts and acacias at Ben McNeill's farm property at Waimarama. In late summer 2017, the ladybird was thought to be preying on *Paropsisterna variicollis* eggs, which corroborates observations of *C. mellyi* browsing on *Paropsisterna* eggs and young larvae in Tasmania. The native Schellenberg's



Paropsisterna variicollis larvae feeding on *Eucalyptus bosistoana* (Photo: D. Satchell).

soldier bug, *Oechalia schellenbergii*, was also observed feeding on *P. variicollis* larvae in November 2016. Assessing the control both parasitoids and predators exert on EVB requires active field research, and is planned for this season.

Dean Satchell (NZ Farm Forestry Association), Ben McNeill (NZDFI) and Toni Withers (Scion).

Huimin Lin's work has been supported by the New Zealand Forest Owners Association and the Specialty Wood Products partnership.

Lin, H., Murray, T.J. & Mason, E.G., Incidence of and defoliation by a newly introduced pest, *Paropsisterna variicollis* (Coleoptera: Chrysomelidae), on eleven durable *Eucalyptus* species in Hawke's Bay, New Zealand. *N.Z. Plant Prot.* **70**, 45-51 (2017).

DISEASES IN THE NEWS

Rapid ōhi'a death

Rapid ōhi'a death is caused by *Ceratocystis fimbriata* (see FH News 264, February 2016). The disease is so-named as it is killing the iconic and abundant ōhi'a (*Metrosideros polymorpha*) in Hawaii.

The pathogen is a complex of many fungal strains that are responsible for different diseases on a variety of hosts. First seen in about 2010, and positively identified in 2015 in the southeast of the Big Island, it has now spread around most of the island and has killed hundreds of thousands of trees so far. Trees die within weeks once they develop symptoms.



Aerial photos of a natural forest taken in 2008 and again in 2012, showing death of many trees by 2012 (Photos: J.B. Friday, U. of Hawaii).

Concerns about threats to New Zealand native forests have been heightened with the introduction of myrtle rust. While we don't know if rapid ōhi'a death could establish itself in New Zealand and how it would affect our *Metrosideros*, this disease is one we need to keep a watching brief on. In response to the outbreak in Hawaii, the Ministry for Primary Industries amended Import Health Standards for nursery stock in 2015, to help prevent the importation of the pathogen.

Red Needle Cast

Many people would have noticed red needle cast in some radiata pine plantings ranging from the central North Island down to the hills surrounding Wellington this winter. A severe outbreak is occurring in the Manawatu-Tararua district, particularly along the Pahiatua Track, prompting concerns in the media that the trees are dying.

Based on our experience, stands that were once badly affected have not sustained high disease levels in the following year. The trees were green but thin crowned. Widespread mortality due to red needle cast is therefore highly unlikely.



A stand that suffered defoliation from red needle cast in the previous year, showing low needle retention.

Red needle cast has been confirmed from the Pahiatua Track previously, and outbreaks were recorded in 2010 and 2012. The symptoms this year look typical of red needle cast and we have no reason to believe that we have a new disease there. However, samples have been sent to our diagnostic lab as a precautionary measure.

Lindsay Bulman (Scion)

Red needle cast in the media:

<https://www.stuff.co.nz/manawatu-standard/news/95447852/disease-takes-over-pine-trees-in-pahiatua-but-councils-says-theres-nothing-to-be-done>

A recent interview on red needle cast with Lindsay Bulman:

<http://www.radionz.co.nz/national/programmes/ruralnews/audio/201855046/morning-rural-news-for-17-august-2017>