Sejanus albisignata: its potential contribution towards apple leafcurling midge (Dasineura mali) biological control in Hawke’s Bay orchards

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Predation has been proposed as one of the possible reasons for the decline in apple leafcurling midge (ALCM) activity and damage observed in Hawke’s Bay orchards in recent years. Sejanus albisignata is a generalist predator and commonly found in apple orchards. To establish if there is any relationship between ALCM and S. albisignata, populations of both species were monitored during 2011-12 on four apple orchards in Hawke’s Bay. Nymphs and adults of S. albisignata were counted on 100 ALCM infested shoots per orchard at weekly intervals. Sex pheromone traps were used to monitor numbers of male ALCM weekly throughout the season in the same orchards. Sejanus albisignata and ALCM activity was well synchronized with the timing of generations one, two and three of S. albisignata coinciding with the second, third and fourth generations of ALCM. There was also a significant positive correlation between the numbers of S. albisignata in each generation and the number of ALCM males trapped for each of the corresponding ALCM generations. These relationships suggest that S. albisignata may contribute towards ALCM control but further studies of their feeding behaviour and numerical responses are required to determine its actual contribution towards biological control of ALCM.

The seed bug Nysius caledoniae recently established in New Zealand – is it a crop pest?

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Nysius caledoniae was first detected in 2006 on a Pukekohe lettuce crop. Species designation was initially not possible but subsequent taxonomic review of the Nysius genus concluded it was Nysius caledoniae (Lygaeidae); synonymous with N. turneri, N. cleavelandensis and N. pacificus. Previous unidentified Nysius specimens were subsequently identified as N. caledoniae, the earliest from Auckland in 2003, suggesting establishment prior to 2006. A recent Northland collection was 188 km north of Pukekohe. Its actual New Zealand distribution is likely much greater. Its biology is similar to N. huttoni. Primary food sources are Asteraceae weed seeds. It has potential as a quarantine pest on export crops, similar to N. huttoni. For example, in USA pre-clearance apple export inspections, N. huttoni accounted for ca 13% of all phytosanitary inspection failures during 1994–2003 (n=40 consignment inspection failures, seasonal mean=4). No reports were found of N. caledoniae on export apple crops or other New Zealand crops. However, as N. caledoniae and N. huttoni appear similar and field differentiation is problematic, it is possible N. caledoniae is mistaken for N. huttoni. Growers are advised to seek formal identifications of Nysius species present on crops to clarify the pest status of N. caledoniae.