

Australasians behaving badly Up-Over: a downunder thrips killing an invasive New Zealand tree in California

Jon Sullivan *¹, Richard Hill ², Laurence Mound ³, Stephen Cameron ³, Cynthia King ⁴

¹ Bio-Protection Research Centre, PO Box 84, Lincoln University, Lincoln 7647, Christchurch, NZ

² Richard Hill and Associates, Private Bag 4704, Christchurch, NZ

³ CSIRO Ecosystem Sciences, PO Box 1700 Canberra, ACT 2601 Australia

⁴ DLNR - Forestry & Wildlife Native Invertebrate Conservation Program, 1151 Punchbowl St. Honolulu, HI

This is a story of novel interactions leading to unintended biocontrol. It is the result of human intercontinental trade between the South Pacific and North America. Ngaio, *Myoporum laetum*, is a New Zealand endemic small tree that was widely planted through coastal California in the 1950s to 1970s. It has naturalised and become an environmental weed in places. In 2005, an unidentified thrips was found on ngaio in Orange County, later described as *Klambothrips myopori*. The thrips has close relatives in Australia and is presumed to be of Australasian origin. Since 2005, *K. myopori* has undergone a dramatic, sustained population eruption that has killed off large numbers of ngaio. We provide a quantitative description on the impacts on *M. laetum* at several Southern California coastal sites. In just three years, *K. myopori* had reached almost every individual at the surveyed sites, killing 25–41% of plants, and partially defoliating most of the rest. Searches for *Klambothrips* in New Zealand to date have been unsuccessful, and are ongoing in Australia. If the species is not a New Zealand native, it may pose a biosecurity threat here. Regrettably, since its invasion of California, *K. myopori* has been accidentally transferred to Hawaii where it is now beginning to kill off individuals of the Hawaiian endemic naio, *Myoporum sandwicense*.

