RADUMERIS TASMANIENSIS SAUSSURE IN NEW ZEALAND: DISTRIBUTION AND POTENTIAL HOST RANGE

B. WILLOUGHBY¹, D. WILSON¹ and B. BARRATT²

¹AgResearch, Ruakura Research Centre, Private Bag 3123, Hamilton

²AgResearch, Invermay Research Centre, Private Bag 50034, Mosgiel

Corresponding author: bruce.willoughby@agresearch.co.nz

The yellow flower wasp (*Radumeris tasmaniensis*) was first reported in Northland, New Zealand, in February 2000 at three locations, Herekino and Twilight on the west coast and Whareana on the east. *Radumeris tasmaniensis* is a solitary wasp that occurs extensively in Australia and Papua New Guinea, and is a parasitoid of large (>1.5 g) scarab larvae. As the threat to native Scarabaeidae was unknown, MAF Biosecurity commissioned a survey to determine the distribution and potential host range of *R. tasmaniensis*. A delineation survey using Malaise, attractant, pitfall, and sticky traps conducted over February and March 2001 at 40 sites on both coasts of Northland confirmed that *R. tasmaniensis* had only established at the three original sites. Parasitised scarab larvae were not detected in a concurrent soil fauna survey. However, circumstantial evidence indicated that larvae of the sand scarab (*Pericoptus truncatus*), a suitable size for *R. tasmaniensis* larvae, were the primary hosts. Adult *R. tasmaniensis* were only observed in dune country, the habitat of the sand scarab and were active during March when the sand scarab larvae were present. African black beetle (*Heteronychus arator*) reaches pest populations in pasture in Northland and is a potential host. However, it was scarce in dune land and was in the adult stage during March so was not available as a host to *R. tasmaniensis*.

GC-EAD STUDIES OF STRIPED CUCUMBER BEETLE (*ACALYMMA VITTATUM*) AGGREGATION PHEROMONE

B. MORRIS¹ and R. RICE SMYTH²

¹The Horticulture and Food Research Institute of New Zealand, Mt. Albert Research Centre, Private Bag 92169, Auckland, New Zealand

²Department of Entomology, Cornell University, Ithaca, NY 14853, USA

Corresponding author: bruce.morris@hortresearch.co.nz

Field trapping studies in New York using caged striped cucumber beetles (*Acalymma vittatum*) with cucumber seedlings as trap lures have demonstrated the presence of a male-produced aggregation pheromone for this species. Consequently we undertook a study to identify pheromone components using gas chromatography coupled to an electroantennographic detector (GC-EAD). Effluvia were collected from feeding male beetles using Super-Q porous polymer, or by solid phase microextraction (SPME) with a polydimethylsiloxane/divinylbenzene (PDMS/DVB) coated fibre. These collections contained one GC peak that consistently gave a large EAD response from female antennae. However, analysis of this peak by GC-MS gave a poor mass spectrum with insufficient diagnostic ions to identify the pheromone.