BIOLOGY AND MASS-REARING OF THE BUDDLEIA BIOCONTROL AGENT *CLEOPUS JAPONICUS* (COLEOPTERA: CURCULIONIDAE)

B.A. GRESHAM[1], R.L. HILL[2], M.K. KAY[1], P.M. TAYLOR[1] and M.C. WATSON[1]

[1]*Forest Biosecurity and Protection, Ensis, Private Bag 3020, Rotorua, New Zealand*
[2]*Richard Hill and Associates, Private Bag 4704, Christchurch, New Zealand*

Corresponding author: belinda.gresham@ensisjv.com

Cleopus japonicus (Wingelmüller) was approved for release by ERMA as a biocontrol agent for buddleia (*Buddleja davidii*) in New Zealand in November 2005 and a mass-rearing programme was developed to provide the insects for the initial experimental releases. Twenty-five adults were placed in each cage (sex ratio 1:1) with cut buddleia foliage contained in a 250 ml conical flask. Eggs are laid into purposefully-excavated cavities within the leaves and leaf buds. After one week, the infested foliage was transferred to large polyethylene storage bins and larvae reared through with fresh foliage added as required. Pupae were either left *in situ* or were harvested into a smaller plastic container for adult emergence. Emerged adults were transferred to Petri dishes containing cut buddleia leaves. After a maturation feeding phase ranging from 4-6 weeks, adults can be stored at 10°C for extended periods. From September 2006 to April 2007, approximately 10,000 adults were produced, and multiple releases made at five experimental sites within the North Island, New Zealand. This method will be used to mass rear *C. japonicus* for widespread release.

DISTRIBUTION OF BRIDAL CREEPER RUST (*PUCCINIA MYRSIPHYLLII*) IN NEW ZEALAND

H.M. HARMAN[1], N.W. WAIPARA[1], C.J. WINKS[1], L.A. SMITH[2], P.G. PETERSON[3], A. JONES[1] and J. STANLEY[1]

[1]*Landcare Research, Private Bag 92170, Auckland 1142, New Zealand*
[2]*Landcare Research, PO Box 40, Lincoln 7640, New Zealand*
[3]*Landcare Research, Private Bag 11052, Palmerston North 4442, New Zealand*

Corresponding author: harmanh@landcareresearch.co.nz

Bridal creeper (*Asparagus asparagoides*), also known as smilax, is an environmental weed most common in northern regions of New Zealand. As an initial step in a biocontrol programme, a survey of the plant in New Zealand has been carried out to determine if damaging pathogens and invertebrates are present. Bridal creeper rust, *Puccinia myrsiphylli*, a host specific leaf pathogen of bridal creeper native to South Africa, was discovered at the outset of the survey in 2005. The rust, which causes premature defoliation and summer die-back, was released as a biocontrol agent for bridal creeper in Australia in 2001 after searches and testing for effective and host-specific agents in South Africa. Data are presented from surveys over two growing seasons to monitor the distribution, spread and impact of the rust on its host plant in New Zealand. The rust is present in Northland, Auckland, Bay of Plenty and Wairarapa, and its infection was observed to cause significant damage to the weed at many of these sites.