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Dilani is in the second year of her PhD under the supervision of Dr. Michael Rostás from Bio-Protection Research Centre, Lincoln University, Dr. Michael G. Cripps from AgResearch, Lincoln and Dr. Jon Sullivan from the Department of Ecology, Lincoln University. Her project focuses on several species of thistles within the Cardueae tribe that are noxious weeds in Australasia and their suitability as hosts for the thistle leaf beetle *Cassida rubiginosa*. The beetle was recently introduced to control Californian thistle (*Cirsium arvense*) but also feeds on other members of the Cardueae tribe. In contrast to what might be expected, this is not considered a non-target risk but a desirable trait since all thistle species in New Zealand are introduced and therefore (potentially) invasive. The aim of this study is to elucidate the chemo-ecological mechanisms that govern the beetles host finding behaviour thereby taking into consideration the role of thistle phylogeny. Testing the suitability of related thistle species as hosts will allow for predictions on the likelihood of positive spill-over effects.

Results from field cage experiments show that thistle phylogeny is a good predictor for oviposition choice and developmental performance of the biocontrol agent. A significant negative correlation was also found between phylogenetic distance to the preferred host, *C. arvense*, and the olfactory attraction to thistle volatiles. In other words: the more closely related the tested thistle species were to *C. arvense*, the more beetles were attracted to their scent and the higher the resulting fitness of *C. rubiginosa* on these plants. Given that other Cardueae plants supported development of the leaf beetle and four species were equivalent to *C. arvense* as hosts for larval survival, suggests that there is potential for an altered pattern of host use in New Zealand.

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The CAWS Student Travel Award will be used to present this work at the joint meeting of the International Society of Chemical Ecology (ISCE) and the Asia-Pacific Association of Chemical Ecologists (APACE) held in Kyoto, Japan on 21 - 28 August 2017. Dilani is excited to meet many experts in the field of chemical ecology and to learn how this discipline can make a valuable contribution to weed science. The meeting will be a great opportunity to receive feedback, gain new insight and to develop her professional career.