

The Suitability of a Stem-Mining Weevil, *Apion immune* (Coleoptera: Apionidae), for Biological Control of Broom (*Cytisus scoparius*) in New Zealand

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Broom (*Cytisus scoparius*) is a serious shrub weed of pasture, forests and protected natural areas in New Zealand and its range is expanding. Larvae of *Apion immune* mine and sometimes gall the broom stems. Host-specificity testing in the UK and in New Zealand has shown that, although the weevil is largely confined to *C. scoparius*, it can develop on the closely related woody shrub tree lucerne (*Chamaecytisus palmensis*). Over 7 times as many adults were reared from broom than from tree lucerne in "no-choice" tests. Regression of the ratio of dead main stem length to total main stem length against adult beetle numbers explained 81% of the variance in stem damage for broom, but was not statistically significant for tree lucerne. Consequently, broom is the strongly preferred host and is likely to suffer much greater damage than tree lucerne. Tree lucerne was introduced to New Zealand from the Canary Islands for shelter and forage. Although it is both nutritious and productive, tree lucerne has limited usefulness due to intolerance of cold, wet growing conditions and a requirement for intensive management. It is a useful late winter and early spring bee nectar source and, in some areas, an important food source for native pigeons. Were *A. immune* to be successfully established successfully, tree lucerne would still be available for bees and native pigeons, particularly in the short term. In the longer term, available alternative plants could be substituted. The benefits of introducing *A. immune* for broom control appear to outweigh the small risk of substantial damage to tree lucerne.

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