native Senecio plants. Damage was notable for 54.5% of the native Senecio plants sampled with 15.3% of this damage caused by the native moth Patagoniodes farinaria and the rest by other unidentified insect agents. Of the ragwort plants damaged, definite attack (presence of an agent) by C. atricapitana or P. isodactyla occurred upon 100% of the rosettes and 51% of the damaged bolting and flowering ragwort plants. The results from this study support the results obtained during detailed host-specificity studies, which indicated that C. atricapitana and P. isodactyla are host-specific to S. jacobaea and therefore pose a very low risk to the native flora.

Host specificity of Megamelus scutellaris (Hemiptera, Fulgoromorpha, Delphacidae), a potential agent for the biological control of waterhyacinth

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The host range of Megamelus scutellaris was studied in the laboratory using two types of multiple-choice test (including and excluding water hyacinth), and one type of non-choice test. In the first multiple-choice test, plants other than Pontederiaceae were used, whereas in the second one only Pontederiaceae were used. For the non-choice test, five species and two varieties in the Pontederiaceae were included, and this test included maize and rice. These last two plants were included because they are host of many species of Delphacidae. Feeding damage was difficult to quantify, so the preference for each plant was indirectly measured using an index that related the number of insects on a given plant and the number of insects alive in the cage used. Mortality was also measured. When given a choice, M. scutellaris significantly preferred waterhyacinth to other plants and it did not show preference to a particular plant when waterhyacinth was absent. The mortality after 48 hrs in the tests where waterhyacinth was present was significantly lower than those where waterhyacinth was absent. In the non-choice trial, M. scutellaris reached the adult stage on only three plants: waterhyacinth, Pontederia cordata lancifolia and P. rotundifolia. However, nymphal mortality was lower, and the duration of the whole immature stage was significantly shorter in waterhyacinth than on the other two plants. These results, along with the fact that, despite extensive surveys, M. scutellaris has been recorded from waterhyacinth in only Argentina and Brazil, indicate that the insect is monophagous and a safe agent to be introduced into other countries for the biological control of this weed.

Realized host-specificity testing of Bruchidius villosus (Coleoptera: Chrysomelidae) in Europe

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Bruchidius villosus, a broom seed feeder, was introduced into New Zealand in 1987 from the UK and from New Zealand into Australia in 1995 as a biological control agent against Scotch broom (Cytisus scoparius) a leguminous shrub native to Europe. Introduction followed extensive testing in the UK, New Zealand and Australia that showed it to be host specific. Contrary to test results, Bruchidius villosus was found emerging from pods of tagasaste (Chamaecytisus palmensis), an exotic fodder species closely related to broom, in New Zealand in 1999. The same year, a field trial of the host range
of several agents (including *Bruchidius villosus*) was set up in a garden at CSIRO European Laboratory at Montferrier (FR 34). Two blocks of three rows, each row containing three plots of ten plants of *Cytisus scoparius*, *Chamaecytisus palmenstis*, and *Genista monspessulana*, were used. A naturally occurring population of *Bruchidius villosus* on the surrounding Spanish broom plants (*Spartium junceum*) colonized the plots. The pods of test plant species were collected when mature in June 2000 and allowed to dehisce in boxes. Several individuals of *Bruchidius villosus* emerged from the tagasaste seeds. The next summer, another garden trial was set up in the same field to grow 40 *Lupinus arboresus* that produced flowers and pods collected when mature. Seed dissection revealed also an attack of *Bruchidius villosus* with adult emergence. Those two trials showed for the first time in Europe that using big healthy plants, a natural population of *Bruchidius villosus* could attack and develop on tagasaste seeds under field conditions. We also detected for the first time a small attack level of this insect within the genus *Lupinus* outside the subtribe Genistineae. This result has wide significance for the use of *B. villosus* in North America.

Specificity tests with *Heteroperreyia hubrichi* (Hymenoptera: Pergidae) and *Calophya terebinthifolii* (Homoptera: Psyllidae) potential control agents against Brazilian peppertree *Schinus terebinthifolius* (Anacardiaceae) in the United States

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The Brazilian peppertree *Schinus terebinthifolius* (Anacardiaceae) was introduced into the southern United States as an ornamental, where it established has become a weed. This plant is native to South America, mainly Brazil. In the beginning of the 1990s, field surveys were initiated in southern Brazil looking for potential natural enemies. Some insects were selected showing potential for biological control of this weed; in particular a sawfly *Heteroperreyia hubrichi* (Hymenoptera: Pergidae), the Brazilian peppertree leaf feeder, and *Calophya terebinthifolii* (Homoptera: Psyllidae) a leaf gall maker. Multiple and non-choice tests were carried out using the methodology proposed by Wapshere. Twenty plant species belonging to nine different botanical families were tested with both agents. A total of 80 no-choice tests was carried out for the sawfly, with 1,497 first-instar larvae. Oviposition tests with adult females of *H. hubrichi* were conducted on the plant species where development had occurred to the pupae stage. The sawfly is oligophagous and was shown to be specific to the *Schinus* genus, Anacardiaceae family. The insect was assessed against Goeden’s evaluation of entomological agents considered for biological control of weeds. *H. hubrichi* obtained a sufficient score on Goeden’s criteria, therefore being considered safe for introduction as a biological control agent against *Schinus terebinthifolius* in Florida. The leaf galler *C. terebinthifolii* is under testing (specificity and damage effects), but also shows potential for future introduction.