

ously described *Aphthona* species were collected. Six of them are locally abundant and have the ability to control leafy spurge in natural conditions. New distributional and host plant data for several *Aphthona* species was collected. To the best of our knowledge this was the first attempt to create a multidisciplinary team including (1) biological control specialist, (2) systematist, specialist in the group, and (3) field person. The team proved its effectiveness. Four weeks of explorations in Russia yielded six potential biological control agents from the leaf beetle genus *Aphthona*.

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## South African Rusts with Potential to Control Two Major Environmental Weeds in Australia

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Exotic weeds such as *Asparagus asparagoides* (bridal creeper) and *Chrysanthemoides monilifera* (bitou bush/boneseed) pose a major threat to biodiversity and conservation in Australia's temperate natural ecosystems. *Asparagus asparagoides* is a climber which establishes itself in relatively undisturbed vegetation, producing dense mats of rhizomes and tubers. *Chrysanthemoides monilifera* is a woody evergreen shrub growing up to 2-6 metres. During extensive field surveys in South Africa in the early 1990's, two rust fungi were identified as potential classical biological control agents for *A. asparagoides* and *C. monilifera*. The macrocyclic and autoecious rust fungus *Puccinia myrsiphylli* infects the cladodes (leaves) and stems of *A. asparagoides*. Severely diseased plants shed infected cladodes prematurely and produce few or no fruits. The rust is commonly found in the winter-rainfall, even-rainfall and summer-rainfall regions of South Africa, wherever *A. asparagoides* occurs. The microcyclic, systemic rust fungus *Endophyllum osteospermi* (formerly referred to as *Aecidium osteospermi*) infects the immature foliage and stems of *C. monilifera*. One to two years after infection, plants develop systemically infected **witches' broom symptoms** with multiple, swollen stems and short internodes, and small and slightly chlorotic leaves. Infected branches produce few or no fruit and usually die within 1-4 years. The systemic nature of *E. osteospermi* is a desirable characteristic for biological control purposes as, once the fungus is established within the host, the infection is retained until the death of the witch's brooms. The rust occurs widely in the winter-rainfall and even-rainfall regions of South Africa. The host-ranges of *P. myrsiphylli* and *E. osteospermi* are currently being determined experimentally. Should high specificity towards the target weeds be confirmed permission to release the rust fungi in Australia will be sought.