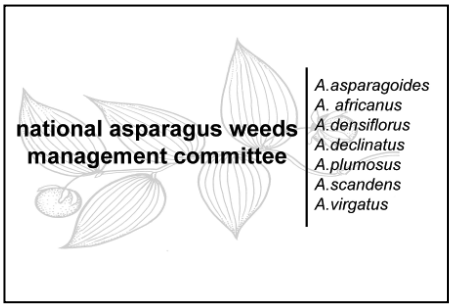
National Asparagus Weeds Management Workshop

Proceedings of a workshop convened by the National Asparagus Weeds Management Committee held in Adelaide on 10–11 November 2005. Editors: John G. Virtue and John K. Scott.



Introduction

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Welcome to this special issue of Plant Protection Quarterly, which details the current state of Asparagus weeds management in Australia. Bridal creeper, *Asparagus asparagoides* (L.) Druce, is the best known Asparagus weed and certainly deserves its Weed of National Significance (WoNS) status in Australia. However, there are other *Asparagus* species in Australia that have the potential to reach similar levels of impact as bridal creeper on biodiversity (and hence their inclusion in the national bridal creeper strategic plan [ARMCANZ *et al.* 2001]). There is much to be gained from sharing information and experiences about the biology, ecology, impacts and control of all Asparagus weeds to advance their overall strategic management.

The National Asparagus Weeds Management Committee (NAWMC) convened the National Asparagus Weeds Management Workshop in Adelaide, 10–11 November 2005. The workshop was attended by 60 people including representation extending from South Africa, through most regions of continental Australia, to Lord Howe Island in the Pacific. The workshop was made possible with funding assistance through the Australian Government's Natural Heritage Trust. This special double issue of Plant Protection Quarterly contains the proceedings of the workshop, as well as additional research and management papers on Asparagus weeds including the review of bridal creeper for the Biology of Australian Weeds series. We thank all authors for the effort they have put into their papers and all the workshop participants for their contribution. A special thanks for workshop organization also goes to Dennis Gannaway and Susan Lawrie.

Reference

Agriculture & Resource Management Council of Australia & New Zealand, Australia & New Zealand Environment & Conservation Council and Forestry Ministers (2001). 'Weeds of National Significance: Bridal creeper (*Asparagus asparagoides*) strategic plan'. (National Weeds Strategy Executive Committee, Launceston).

Asparagus weeds in Australia – a South African perspective with emphasis on biological control prospects

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Summary

The results of an extensive South African survey to identify potential biological control agents for *Asparagus asparagoides* are discussed. Two forms of *A. asparagoides* were found that are distinguished by characteristics of the tuber system. Not all the natural enemies found in association with *A. asparagoides* attacked both forms. Three biocontrol agents (*Zygina* sp., *Crioceris* sp. and *Puccinia myrsiphylli*) from South Africa, have been released in Australia against the first form which has a wide distribution in South Africa. No candidate was found that damages the tuber system of this form of *A. asparagoides*, but foliage damage reduced tuber mass and fruit production under experimental conditions. The seed wasp *Eurytoma* sp. occurs throughout the distributional range of this form of *A. asparagoides*. Damage levels vary but can be 90% or more. The second form of *A. asparagoides* has only recently been found in Australia. In South Africa it is restricted to the winter rainfall region of the Western Cape. This form of the plant is a host for *Zygina* sp. and *Eurytoma* sp. and the tubers are damaged by weevil larvae, but *Crioceris* sp. and *P. myrsiphylli* were not recorded.

Potential taxonomic difficulties of some of the other *Asparagus* spp. that occur in Australia are discussed, and preliminary observations are provided on their associated natural enemies in South Africa.

Keywords: *Asparagus*, *Asparagus asparagoides*, Australia, biological control, *Crioceris*, environmental weed, *Eurytoma*, natural enemies, *Puccinia*, South Africa, *Zygina*.

Introduction

South Africa supports a wealth of *Asparagus* species with several endemic to the region. The most recent taxonomic revision of South African plants recognized 81 species, of which only 15 are recorded as occurring naturally beyond the borders of southern Africa (Obermeyer *et al.* 1992). The higher taxonomy of *Asparagus* spp. has tended to oscillate between the recognition of one and