

WEED ALERT

ACACIA PARADOXA: NATIVE OR ALIEN?

Teagan Smith

Recently one of our *Land for Wildlife* members asked us to identify an *Acacia* from a photograph. She indicated that the species is a prolific grower and that she was interested in sourcing more for revegetation purposes. Bruce Maslin, Senior Principal Research Scientist with CALM and WA's leading expert on acacias, indicated although it was difficult to identify from a photograph, he thought that it might be *Acacia paradoxa*. This enquiry unveiled an interesting path of discovery, providing insight into the deductive reasoning behind determining whether a species is native or alien.

At around the same time as the LFW enquiry, the Albany Bushcarers Group had written to Mr Maslin regarding concerns that this particular species, *A. paradoxa*, was spreading and creating monocultures in some areas. The Albany Bushcarers were interested in its status in order to determine whether they required a licence from CALM to remove it from bushland.

With increased interest in the origin and obvious weed problem presented by the somewhat puzzling *A. paradoxa*, its origin was investigated. Bruce considered the species status and based on several supporting findings, including good historical, phytogeographic and taxonomic evidence, unveiled the truth about *A. paradoxa*.

Examining the extant records at the W.A. Herbarium, Bruce found that the earliest W.A. collections of this species are from Guildford, collected by R. Helms in 1897 (and then again in 1901 by C. Andrews), and King George Sound in Albany, by Col. Goadby in 1898. More recent records include Wagerup, by

R.D. Royce in 1952, Mt Melville in Albany by K. Newbey in 1970 and Mount Barker, near the old Government Railway Dam, collected by Kevin Kenneally in 1971. Based on these herbarium records it was evident that *A. paradoxa* had been around both the Perth and Albany areas for quite some time. However, there were no records dating back beyond about 100 years ago. Bruce concluded that this was significant because these areas had been well collected by quite a number of botanists since the beginning of the nineteenth century, including James Drummond and Ludwig Preiss (who collected extensively in the southwest, including Albany) and Robert Brown & Alan Cunningham (who collected extensively in the Albany area). Hence, had *A. paradoxa* been in either region in this early period, there would be records dating back beyond 1897.

Further compounding the evidence as to the alien status of *A. paradoxa*, Bruce noted that the range of the species is very discontinuous (patchy) and its pattern of occurrence is not what you would expect to see if it were a native species. Also, many of the plants grow on disturbed sites (such as road verges) or in other areas where there is a high likelihood that man could have introduced it. From a phytogeographic viewpoint *A. paradoxa* displays the characteristics of an introduced species.

Finally, Bruce noted that all of the closest taxonomic relatives of *A. paradoxa* occur in eastern Australia - there are none in Western Australia. If *A. paradoxa* were indeed a native to W.A., then it would be expected that some evolution would have occurred within this region because it is genetically a very labile species.

Based on the above information, he concluded that there is good evidence to indicate that *A. paradoxa* is not a W.A. native species. Additionally, the species is known to be invasive, not only within Australia but also abroad and therefore should be classified as an alien to W.A.

Ken Atkins, Manager of CALM Wildlife Branch, indicated that since there is sufficient evidence to support deeming *A. paradoxa* non-native to Western Australia, then it is not protected flora under the *Wildlife Conservation Act*. Therefore, no licence is required under this Act to 'take' it. As a non-native, the only permission required is that of the manager of the land on which it occurs. For example, if the species occurs in a CALM reserve, then authorisation from CALM would be required to control it.

For info on ID of non-native acacias, Bruce may be contacted on 9334 0510. For licensing, please contact CALM Wildlife Branch on 9334 0455.

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Photo: Florabase, CALM