

ATHEL PINE – A REAL RISK FOR QUEENSLAND

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ABSTRACT

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BACKGROUND

Athel Pine (*Tamarix aphylla*) is a Weed of National Significance occurring in Queensland, Northern Territory (NT), Western Australia (WA), South Australia (SA) and New South Wales (NSW). At the national level the National Athel Pine Management Committee was formed in late 2005 to oversee the implementation of the *National Athel Pine Strategic Plan 2001*. The committee has representatives from state and local government, NRM regions and Indigenous Land Management Facilitators.

In Queensland Athel pine is declared a Class 3 pest plant under the *Land Protection (Pests & Stock Route Management) Act 2002* and it is illegal to sell the plant or seeds. Species declared as Class 3 may be subject to local legal control outside environmentally significant areas. Queensland Local Government Pest Management Plans that include Athel pine are as follows:

Objective to eradicate	Boulia Shire Council
High priority	Townsville Shire
Medium priority	Flinders and Winton Shire
Medium to low priority	Banana Shire Council
Low priority	Beaudesert, Boonah, Bulloo, Chinchilla, Esk, Gatton, Ipswich, Laidley, McKinlay, Mt Isa and Richmond

Athel pine affects the pastoral industry by forming dense thickets along inland waterways, including ephemeral streams and lakes impacting on stock mustering. It also consumes large amounts of water, reduces its availability for stock and the environment, alters the course of rivers and increases sedimentation rates. It concentrates salt, which is excreted by its leaves, making the ground around Athel pines more salty and excludes native pasture grasses and other salt-sensitive plants, thus reducing biodiversity. It can also cause corrosion of gutters, rooves and equipment when planted adjacent to infrastructure, and falling limbs are of concern to human and stock safety.

Sleeper weed

Athel pine is classified as a 'sleeper weed' because it was present in Australia for some time before it became weedy. A native to northern Africa and Asia, it was first promoted as a useful tree throughout semi-arid and arid Australia and introduced into Whyalla SA and Broken Hill NSW during the 1930s and 1940s, via California. These plantings were soon followed in the 1940s and 1950s by widespread plantings in other states as wind and sun shelter species at homesteads, communities, bores, stockyards and for erosion control. Later plantings were also done as part of mine rehabilitation works. However, it was not until the 1970s and 1980s that the true weed potential of this plant

was recognised, by which time it had developed along 600 kilometres of the Finke River in NT. This rapid and sudden expansion corresponded with several large summer floods which are thought to have provided the perfect environment for seed germination and establishment (Griffin *et al.* 1989). Since then athel pine has naturalised in many other areas of Australia, particularly where original plantings were adjacent to waterbodies including ephemeral lakes and streams and along old bore drains. Currently Athel pine only occurs across a small fraction of its potential distribution within Australia (Figure 1).

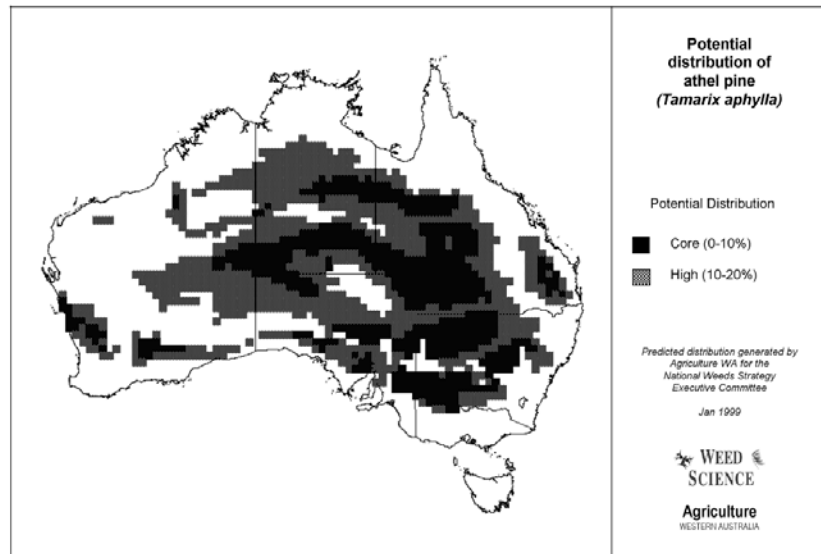


Figure 1 Potential distribution of Athel Pine in Australia

QUEENSLAND SITUATION

Known naturalised infestations of Athel pine in Queensland occur at Mt Isa along Kings Gully on and outside the Mt Isa Mines site, along Flinders River near Hughenden, in the Gemfields area in the Fitzroy Basin Emerald Shire, in the Dawson River catchment near Cracow Gold Mine growing on a disused tailings dam and around Townsville. In addition there are numerous plantings around homesteads in central and western Queensland.

The Queensland government has recently invested nearly \$60,000, in partnership with Southern Gulf Catchments, local government and mining companies, into the control of Athel pine infestations at Mt Isa, Hughenden and Gemfields from 2006 to 2009 under the *Blueprint for the Bush – a Pest Offensive* initiative.

THE FUTURE

The numerous plantings of Athel pine around homesteads in northern, central and western Queensland, where these are adjacent to waterbodies, pose a real risk for future invasion events and naturalisation as has been seen in the Finke River catchment in the NT. Based on this evidence the Lake Eyre drainage basin must be considered a potentially high risk area for future invasion as would many drainage systems throughout Queensland.

As such we need to improve mapping of known infestations, via GPS recordings and agreed core attributes, and prioritise infestations based on their potential risk of spread.

This process has started in SA and WA and has already enabled strategic investment into state and nationally significant infestations as well as allow for future surveillance of high risk areas.

Hybridisation

We also need to lodge additional specimens, along with GPS locations and agreed core attributes, with the Queensland Herbarium. These specimens will be essential for any future studies on the impact of other Tamarisk species, namely *T ramosissima* and *T parviflora* on Queensland and Australia. Current information from western USA has found that Athel pine can hybridise with *T ramosissima* creating a hybrid that may prove more aggressive than either of the parent plants. The USA experience with Tamarisk, where it has been present since the 1800s, is that it is now covering more than 1,000,000 riparian acres (Brotherson & Field 1987) and is expanding by 40,000 acres per year (DiTomaso 1998), eroding the biodiversity of many natural areas including major river systems and national parks.

For further information and to report infestations and plantings, please contact Sandy Leighton WoNS National Athel Pine Coordinator Sandy.Leighton@nt.gov.au.

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