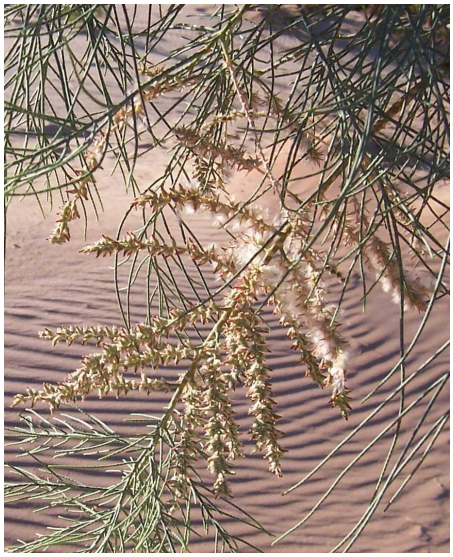
Athel Pine on Western Australian Mine Sites

What is Athel Pine?

Athel Pine (*Tamarix aphylla*) is a Weed of National Significance and is regarded as one of the worst weeds in Australia.
It is a spreading tree to 15m tall, with rough bark and grey brown stems.
The dull green leaves resemble pine needles but it is not a conifer. It has small pinkish white flowers and seeds with fine hairs for wind dispersal.

How did it come here?

Athel Pine was brought to Australia as an ornamental plant in the 1930s from California, and was an iconic backyard tree in the 1960s and 1970s.
Because it grows so well in arid and saline environments, it has been used as a rehabilitation plant on mine sites throughout Western Australia.
Athel pine is a serious environmental weed and has already impacted on rivers and ephemeral lakes in Australia.



Why does it need to be controlled?

Athel pine has a high potential for spread in riparian systems (it has spread over 600km in the Finke River system in the Northern Territory).
It has a high water uptake, which can alter ecosystems and have economic impacts.
The leaves excrete salt, which alters the soil profile and excludes native plants from the area.
It excludes native fauna by replacing native habitat.

Mine Site Infestations

Prioritising areas for control

Riparian zones – these are high risk zones for spread and environmental impact and infestations in these areas must be controlled as a matter of priority.
Seeding considerations – leaving a restricted population (e.g. in a pit) will require yearly monitoring for seedlings in adjacent areas
Single parent trees should be eradicated as they present a low cost method of preventing future infestations

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Pit infestations

Reasons for removal:

Potential spread to environmentally sensitive areas
Pits create a seed bank that can require long term financial commitment to control

Challenges facing removal:

Potential occupational health and safety issues working in decommissioned pits
High cost of removing trees inside pits
Chemical use issues when spraying near water

Recommendations:

Eradicate trees spreading towards environmentally sensitive areas as a priority.
Plan to gradually eradicate trees in pit, or fence pit off from feral animals that can spread the seeds easily.

Where erosion is an issue, adopt a chequered approach to poisoning and replacing with native species.

Tailings Storage Facility infestations

Reasons for removal:

Potential spread to areas of environmental importance
Exclusion of rehabilitation of native species

Challenges facing removal:

Potential occupational health and safety risk

Recommendations:

Control spread around TSF as a first priority and aim to eradicate infestations prior to rehabilitating or capping the TSF.
Do not move soil from infested areas as root and tree fragments will result in new infestations.

Control Methods

Foliar Spraying

Chemical recommended: Arsenal Xpress™ or Starane 200 , plus Pulse (wetter).

Advantages:

Proven success with chemical
Easier for smaller trees

Disadvantages:

High volume of chemical required for larger trees (leading to greater cost)
Logistic difficulty involved in spraying larger trees
Potential for off-target species damage
Limitations for chemical use around water bodies

Basal Barking / Stem Injection

Chemical recommended: Grazon DS™

Advantages:

Cost effective (less chemical required than for foliar spraying)
Easier for larger trees
No off-target species damage

Disadvantages:

Some training required for operators as trees must be ringbarked and then injected with poison

Photo: James Miller, US Dept of Agriculture

Photo: Dept Natural Resources, Environment and the Arts, Northern Territory

Mechanical removal

Using bulldozer for large trees, or hand pulling for seedlings. Must use a ripper in addition to a dozer in order to remove root systems

Advantages:

Faster control of thick infestations

Disadvantages:

Follow up treatment (usually foliar spraying) is required
Off-target species damage
Can cause erosion in unstable topography
Expensive

Legislative Controls

Athel Pine is a Declared Plant in all States and Territories. As such, it is illegal to introduce, move or sell Athel pine in any State or Territory in Australia.

References

- CRC for Weed Management (2003). Weed Management Guide: Athel pine or tamarisk – *Tamarix aphylla*.
- Commonwealth of Australia and the National Weeds Management Committee (2000). Athel Pine (*Tamarix aphylla*) Strategic Plan. http://www.weeds.org.au/docs/apstrat.pdf

Contacts

For further information on control of Athel pine please contact:

- National Athel Pine Coordinator, http://www.weeds.org.au/WoNS/athelpine/
- Weeds Officer, Dept. of Environment & Conservation – Vanessa Jackson 08 9080 5555, vanessa.jackson@dec.wa.gov.au
- Southern Rangelands Facilitator, Rangelands NRM – Tim Thompson 08 9088 6021, tthompson@agric.wa.gov.au

Natural Heritage Trust

RANGELANDS NRM Co-ordinating Group