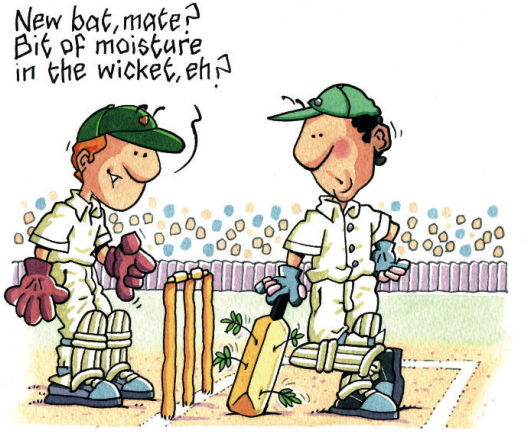
Friend or foe?

Although familiar and often well-loved icons of the Australian landscape, willows (*Salix* spp.) are now among the most serious riverbank and wetland weeds in temperate Australia and have been listed as one of the country's 20 Weeds of National Significance*.

Did you know? *There are more than 300 types of willows in the world and more than 30 of these are naturally growing and spreading across Australia.*

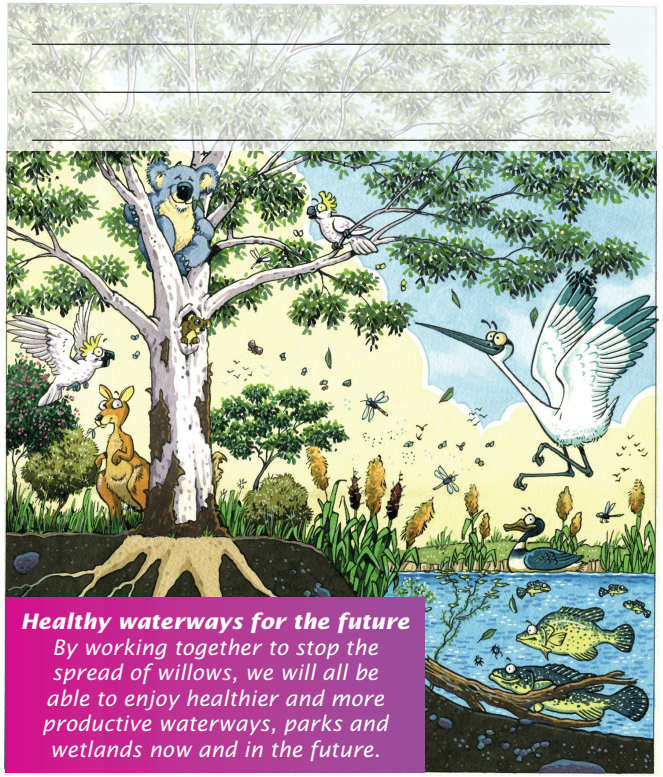
Willows were originally introduced to Australia from Europe, Asia and North and South America for basket making, cricket bat production, stream stabilisation, ornaments and shelter. In this new environment and without their natural enemies, many willows have spread rapidly and are causing significant problems for our waterways and wetlands.



*excludes S. babylonica, S x reichardtii and S. x calondendron

Where can I get further information or advice?

For information, visit **www.weeds.org.au/WoNS/Willows**. For further advice, contact your Catchment Management Authority, Natural Resource Management (NRM) board or state/local government weeds officer.
Local contact details:



Healthy waterways for the future
By working together to stop the spread of willows, we will all be able to enjoy healthier and more productive waterways, parks and wetlands now and in the future.

State Government Victoria Department of Primary Industries

Australian Government

Published by the Victorian Government Department of Primary Industries, May 2007. Reprinted June 2009

Authorised by: Victorian Government, 1 Spring St, Melbourne, Victoria, 3000 Australia
ISBN 978-74199-404-9 (print) ISBN 978-1-74199-479-0 (on-line)

Weeds of National Signficance

Willows
friend or foe?

National Willows Taskforce

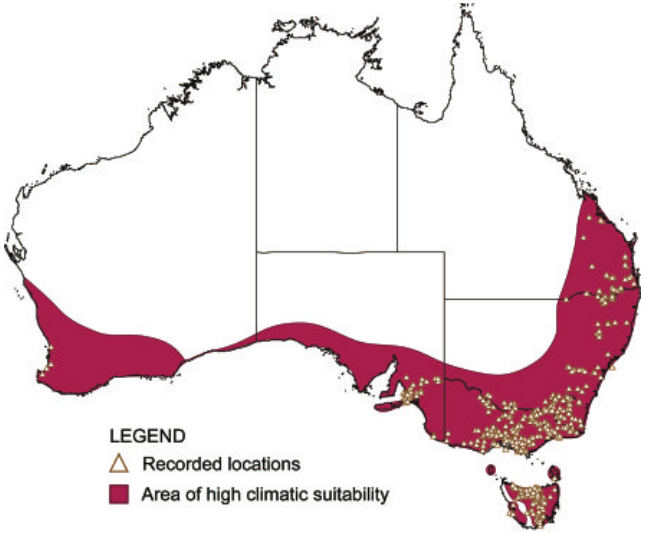
Why are willows a problem?

Willows infest thousands of kilometres of waterways across southeast Australia and cause substantial social, economic and environmental impacts, including:

- ***increased erosion and flooding and damage to nearby infrastructure***
  - Although originally planted along waterways to combat bank instability, willows actually grow multitudes of stems that obstruct and divert floods and subsequently erode riverbanks, particularly along small, narrow rivers.
- ***reduced quality and flow of water***
  - In contrast to native evergreens, willows drop all of their leaves at once in autumn which break down more quickly than leaves of native plants. This alters the temperature and oxygen content of the water.
  - Willows growing in the water can consume substantially more water than river red gums on the riverbank.
- ***less habitat available for fish, birds, insects and spiders***
  - The dense summer shade cover of willows combined with their impenetrable root system greatly inhibits the growth of land and water plants.
  - Willow-lined reaches of rivers support significantly less insects, fish and birds when compared with reaches lined with native trees and shrubs.
- ***reduced access to streams for fishing and aquatic activities***
  - Willows form dense root mats and stems that mat into the river, blocking access for speedboats, canoes and rafts.

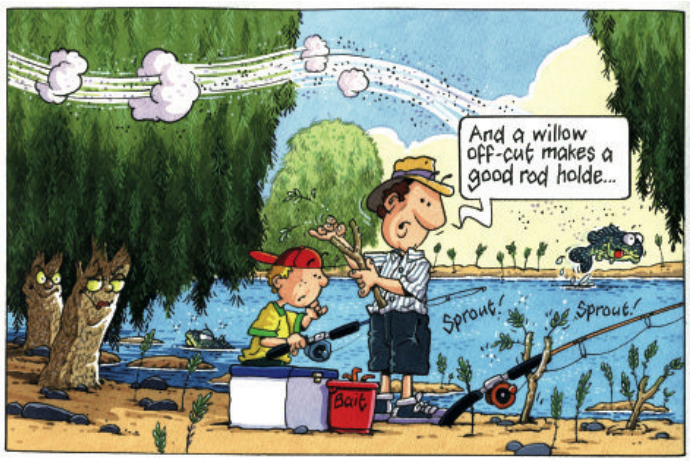
"The local stream had been almost completely dry for years; we thought it was because of the drought. Then we helped the Landcare group remove the willows. After that, within just a few months, the river was flowing again, with crystal clear water." Drew English, Conservation Volunteers Australia, southern NSW and ACT.

Current and potential distribution



Willows spread easily

Willows occupy less than 10% of their potential habitat in Australia. They have the potential to invade waterways, drainage lines, wetlands and other moist areas in all states and territories. The largest infestations currently occur in NSW, the ACT, Victoria and Tasmania.



Willows can spread by seed or branches. The spread of some willows may appear slow for many years, but given the right conditions, just a few adult willows could produce thousands of seedlings in just one season.

Spread by seed

Some willows can cross breed (hybridise) readily and can spread by seed up to 100km. These willows may spread rapidly across regions and states, so even the most remote environments are at risk of invasion. The ability of willows to spread large distances by seed highlights the need for coordinated action across regions and states.

Spread by branches / layering

Many willows readily reproduce by twigs breaking off and forming new trees downstream or by layering, where trunks collapse or branches hang down and form new roots where they touch the soil. Twigs can spread many kilometres before growing at a new location.

Most willows are banned

It is now illegal to trade or distribute most types of willows in all States and Territories and the control of certain willows is legally required in some areas. For a summary of the legislative status of willows in your region, go to www.weeds.org.au/WoNS/Willows.

Alternatives to willows

The re-establishment of native, local plant species is the best alternative to planting willows, as they provide many environmental and social benefits such as increasing stream flow and health and providing quality habitat for animals.

Where native plants are difficult to establish, long stem native tubestock are a viable alternative. 'Long stems' are an innovative method of growing and planting native trees that estabish easily, grow rapidly, produce extensive roots and require little attention.

How can I help stop the spread?

- Tell others about the problems willows cause
- Do not plant willows or willow stems
- Get involved, support willow management in your area and learn to identify and monitor problem willows
- Alert local weeds officers or waterway managers to new willow outbreaks
- Encourage the planting of natives along waterways to prevent future invasion by willows or other weeds