

WEEDS OF NATIONAL SIGNIFICANCE

Willows

What are willows?

Willows are trees that have been planted on rivers and streams in South-Eastern Australia since early settlement. Widely planted to control erosion of stream banks, most species of willow are now declared 'Weeds of National Significance' under the national weed strategy because of their negative environmental and economic impacts.

Where are they found?

Willows grow in permanently or seasonally wet or waterlogged sites. The largest infestations in Australia are in Victoria, Tasmania, New South Wales and the Australian Capital Territory.

How do they spread?

Many willows spread by fragments of stems or twigs breaking off and growing new roots in water. Pieces can travel many kilometres before growing at a new location.

Seed is the main method of spread for several other species, and these can invade off-stream wetlands from sea level to alpine locations. Seed carried by wind or water easily travels more than one kilometre, with small amounts potentially spreading up to 100 kilometres.

More than a dozen of the 450 species world-wide have reached rural Australia. Nearly all have begun to propagate here, not only with their own kind, but also with other willow species. Most of the willows grown from seed in Australia are thus hybrids and often impossible to identify precisely.

What is the Government doing to control the problem?

The Goulburn Broken Catchment Management Authority has developed a Willow Management Strategy to help prevent further spread of willows, and is progressively reducing their impact on rivers and streams.

This strategy involves:

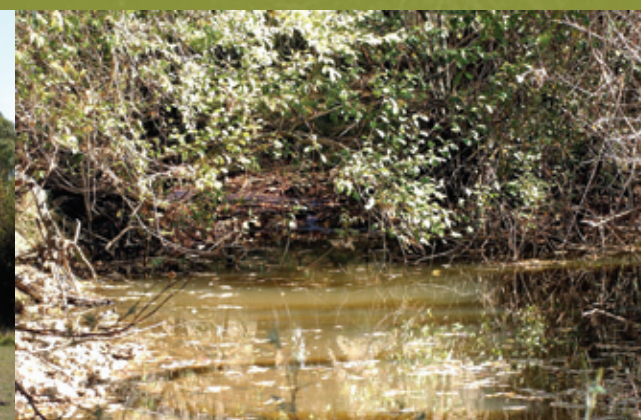
- Removing existing willows from waterways and revegetating areas with indigenous species.
- Managing and controlling the spread of new willows.
- Engaging community participation and understanding.

References

'Weeds of National Significance: Weed Management Guide', 2003, Department of the Environment and Heritage and the CRC for Australian Weed Management, Canberra.
'Willow Management Strategy', 2004, Goulburn Broken Catchment Management Authority, Shepparton.
'Problem Willows', 2002, K. W. Cremer.
All willow sketches from the 'Willow Identification Guide', 1998, Department of Sustainability and Environment, Victoria. Guide compiled by the Albury/Wodonga Willow Management Working Group.

Disclaimer

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Why are willows a problem?

Rapid Spread

Willows are highly invasive and spread quickly along the banks of waterways. This can destroy the natural ecosystem and have a severe environmental and economic impact on the health of plants and animals in and around the waterway.

Poor Water Quality

Willows create dense shade and create an oversupply of leaf fall in Autumn which, amongst other things, suppresses understorey growth, reduces dissolved oxygen concentrations in the water and alters the timing, quality and consistency of the food supply for the aquatic food chain. This has a negative impact on the health of native animals, fish and bugs including Murray Cod, Golden Perch and Platypus.

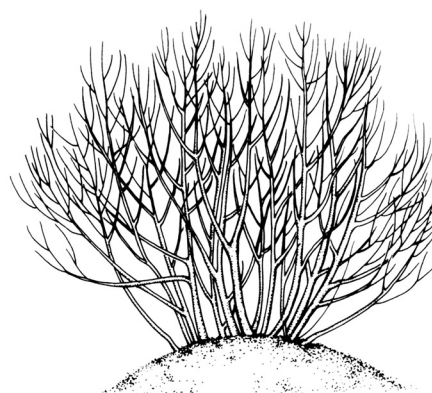
Flooding and Erosion

Willows can take root in the bank of a waterway, grow midstream, change the channel shape and capacity, divert the stream flow and contribute to erosion.

Habitat Reduction

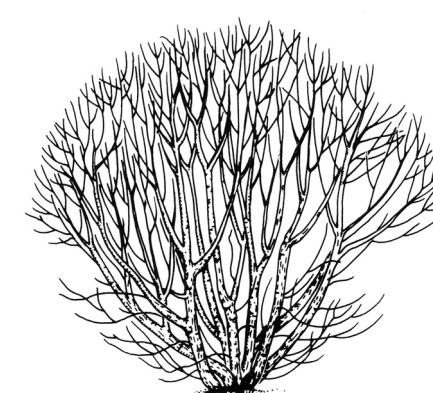
Willows reduce preferred habitat (e.g. red gums, in-stream snags, undercut banks and deep holes) for both land and aquatic animals.

Which are the problem willows?



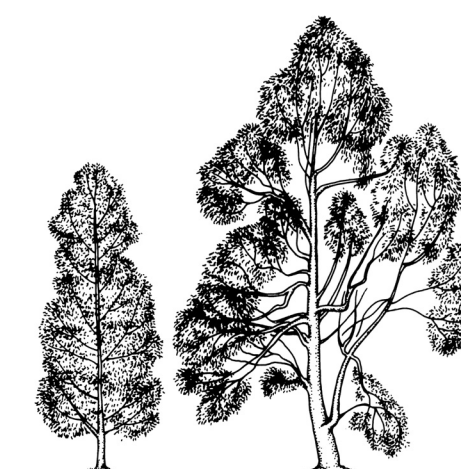
Grey willow or Pussy willow (Salix cinerea)

This is the most invasive willow in Australia. It is a large spreading shrub or small tree with twigs or branches that are hard to break, and reproduces mainly by seed. Distinguished from other willows by its broad leaves.



Crack willow (Salix fragilis) and Basket willow (Salix x rubens)

These single or multi-stemmed trees are by far the most widespread and abundant willows in Australia, spreading from broken twigs and branches.



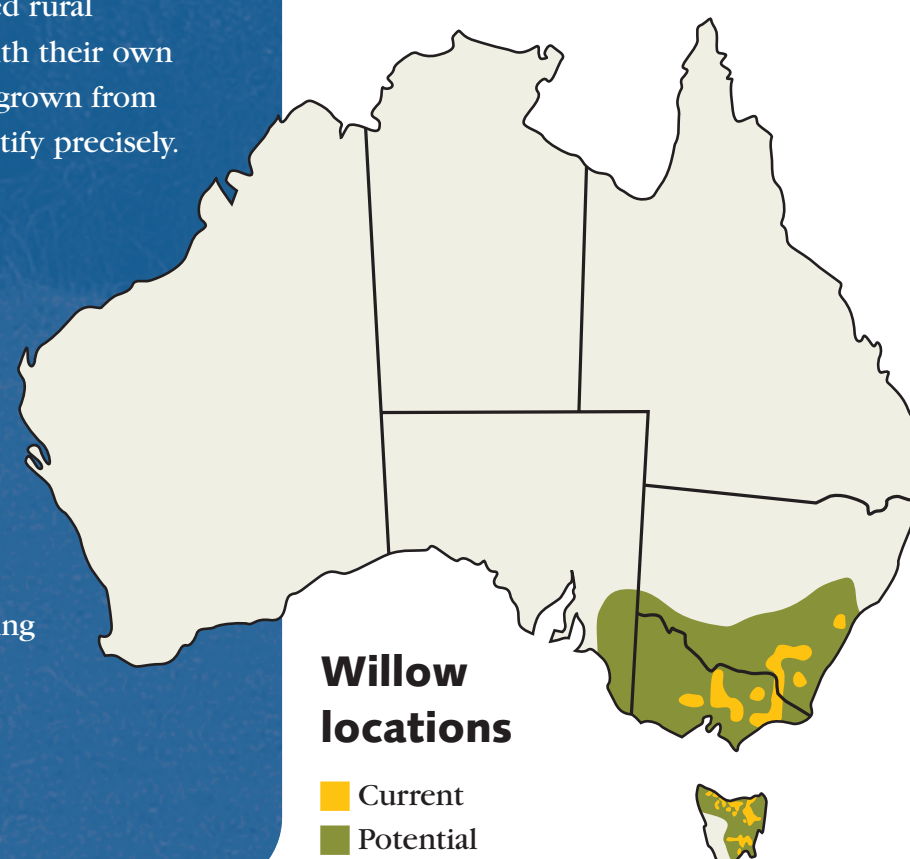
Black willow (Salix nigra)

The black willow has the potential to behave in the same invasive manner as the grey willow in wetlands. It spreads through immense seed production.



Golden upright willow (S. alba var. vitellina)

This female clone breeds vigorously with other willows and is the cause of seedlings in many rivers.



What can I do to help prevent the spread of willows?

The Goulburn Broken Catchment Management Authority's Waterway Grants Program provides cash incentives for landholders to undertake works to prevent or repair damage along waterways.

Contact the Goulburn Broken Catchment Management Authority on 03 5822 2288, or visit www.gbcbma.vic.gov.au.

Further information regarding waterway restoration can be found at www.rivers.gov.au.

