

Weed Sheet

Weed sheet : Spiny rush

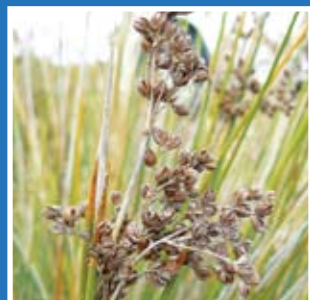


Government of South Australia
South Australian Murray-Darling Basin
Natural Resources Management Board

Spiny rush

(*Juncus acutus*)

Spiny rush (*Juncus acutus*) has the capacity to exclude preferred pasture plants, reduce carrying capacity, injure stock and restrict movements of animals, machinery and humans. It is native to the Mediterranean, Europe, America and Africa and is also known as Sharp rush.



Spiny rush



Image: J Tesoriero



Image: S Edwards



Image: J Tesoriero



Image: E Murray



Image: T Bowman



Image: T Bowman



Image: T Bowman

What is it?

Spiny rush (*Juncus acutus*) has the capacity to exclude preferred pasture plants, reduce carrying capacity, injure stock and restrict movements of animals, machinery and humans. It is native to the Mediterranean, Europe, America and Africa and is also known as sharp rush.

What does it look like?

Growth: Spiny rush is an erect tussocky rush that reaches 2m high and up to 2m wide. It is a long lived perennial herb that exhibits a globe like form due to numerous flowering stems that are cylindrical, are approximately 3-5mm in diameter, filled with continuous pith and arise from the crown in an angular fashion.

There are two main native species that are often confused with Spiny rush (3) including: Knobby Club rush (*Isolepis nodosa* (1)) and Sea rush (*Juncus kraussii* (2)).

Leaves: Spiny rush leaves are similar in appearance to the stems, both are filled with pith (spongy cellular tissue). The dark green leaves of Spiny rush are cylindrical, 3-5mm in diameter and taper to rigid sharp spines after which the plant is appropriately named.

Flowers: Flowers of Spiny rush are green to reddish brown and occur in roughly rounded stalked cluster of approximately 30mm in diameter. Plants do not flower until at least two years old.

Fruit: Spiny rush fruits are a chestnut coloured ovoid nut-like capsule when ripe with a short point at one end. Throughout the year the 4-6mm fruits fade to a grey-brown colour.

Seed: Each capsule contains numerous irregularly shaped seeds 1mm or less in size from which a small papery protrusion is visible.

Roots: Spiny rush has a mass of shallow fibrous roots and short rhizomes.

Why is it a problem?

Spiny rush is highly unpalatable to stock with the exception of an occasional nibble on young plants. Some *Juncus* species have high levels of cyanide although there is little information regarding the toxicity of Spiny rush.



It has the potential to render agricultural land and watercourses impenetrable to stock and humans due to the presence of sharp spines resulting in a reduction in the availability and accessibility to feed and water.

Dense infestations readily out-compete all other vegetation, increase the potential for floods due to restricted water flow, act as harbour for vermin such as rabbits and foxes and prevent management actions such as ripping of warrens.

Large dense infestations also prevent the improvement of low fertility soils.

Affected land uses: Grazing/pasture, coastal flats, moist low lying regions, disturbed areas of low fertility such as mine dumps and especially areas of high salinity.

Where is it found?

Spiny rush is known to exist within the above land uses in Victoria, New South Wales and South Australia.

How is it spread?

Spiny rush is principally dispersed via water, along drainage channels and creek lines although the small seeds can readily contaminate agricultural produce and adhere to machinery and vehicles in mud and soil. Plants can also establish vegetatively from segments of the crown as a result of cultivation or physical/mechanical disturbance.

How do we control it?

Prevention:

Once established Spiny rush can be difficult to control, hence it is recommended to ensure all produce, machinery and vehicles are decontaminated prior to entering the property.

Regular monitoring of waterways is recommended to enable the control of isolated plants and minimise seed sources to prevent the establishment of dense infestations.

Physical control:

Due to the lack of accessibility of dense

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Active growth	Active growth	Active growth	Active growth	Active growth	Active growth	Active growth	Active growth	Active growth	Active growth	Active growth	Active growth
Flowering	Flowering	Flowering	Flowering	Flowering	Flowering	Flowering	Flowering	Flowering	Flowering	Flowering	Flowering
Seed set	Seed set							Seed set	Seed set	Seed set	Seed set
Germination	Germination										Germination

Growth stages of SPINY RUSH (*Juncus acutus*)

■ Active growth ■ Flowering
■ Seed set ■ Germination

infestations mechanical/physical control is often the most effective method of control. Use of a heavy tractor with a grader blade, chisel plough or a unit known as a yacca cutter (consisting of a 1.5 cm thick and 8cm wide steel blade) is suggested. In both cases the implement is used to cut the Spiny rush just below ground surface; however the effectiveness is largely dependent on the skill level of the operator in addition to soil type and moisture level.

Following physical removal, heap and burn all plants then cultivate soil to encourage the growth of seedlings. Seedlings should then be re-cultivated over the following two summers.

Chemical control:

Chemical control of dense infestations of Spiny rush is often not practical due to limited access, however is suitable for small isolated patches or individual plants. Chemicals registered for the control of spiny rush include Glyphosate and Hexazinone. Be sure to always carefully read and follow product label directions.

Anecdotal evidence suggests that burning mature Spiny rush plants then applying chemical to the new growth has achieved some control.

Biological control:

At present biological control is not being investigated for the control of Spiny rush in South Australia.

References

Parsons, W.T. and Cuthbertson, E.G. (2001) *Noxious Weeds of Australia* 2nd Edition, CSIRO Publishing.

Cunningham, G.M., Mulham, W. E., Milthorpe, P.L. and Leigh, J.H. (1981) *Plants of Western New South Wales*, N.S.W Government Printing Office.

Spiny rush (*Juncus Acutus*) (online) 2009, available: <http://www.weeds.org.au/cgi-bin/weedident.cgi?tpl=plant.tpl&ibra=all&card=W22>

Contact us



Government of South Australia
South Australian Murray-Darling Basin
Natural Resources Management Board

Weed sheet : Spiny rush

Legislation

Spiny rush (*Juncus acutus*) is currently not declared in South Australia.

The South Australian Murray-Darling Basin Natural Resources Management Board assesses pest plants for declaration under the *Natural Resources Management (NRM) Act 2004* on an ongoing basis through the use of a risk assessment matrix.

Juncus acutus is currently a declared noxious weed in Victoria which has the status of regionally controlled, prohibited and restricted in different regions throughout the state.



Natural Heritage Trust

Helping Communities Help Australia

An Australian Government Initiative

Head Office

Mannum Road
PO Box 2343
Murray Bridge SA 5253

Telephone : (08) 8532 1432
Facsimile : (08) 8531 1843
www.samdbnrm.sa.gov.au
enquiries@samdbnrm.sa.gov.au

Copyright.

This work is Copyright. Apart from any use permitted under the Copyright Act 1968 (Cwlth), no part may be reproduced by any process without prior written permission obtained from the South Australian Murray-Darling Basin Natural Resources Management Board. Requests and enquiries concerning reproduction and rights should be directed to the General Manager, South Australian Murray-Darling Basin Natural Resources Management Board, PO Box 2343, Murray Bridge, SA 5253.

Disclaimer.

The South Australian Murray-Darling Basin Natural Resources Management Board makes no representation as to the accuracy of the information or its sufficiency or suitability for the application to which any individual user may wish to put it. The South Australian Murray-Darling Basin Natural Resources Management Board accepts no liability for any use of the information or reliance placed on it and no responsibility is accepted for events or damages resulting from its use.

The information provided in this publication is provided "as is" and is not intended to be exhaustive or to replace the need for interested parties to make their own enquiries.

The appearance of non-government acknowledgements in this publication is not an endorsement by the South Australian Murray-Darling Basin Natural Resources Management Board of those acknowledged companies, products or services.