

In this edition we focus on some of the environmental issues associated with serrated tussock.

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Serrated Tussock Working Party for NSW and ACT



Serrated tussock - infestation to inferno

Following the recent rains we may see a new threat from serrated tussock as infestations have the potential to become an inferno.

Fire is a problem in most summers in Australia, but particularly so after good seasons where spring and summer rains have produced abundant growth such as those experienced over many district across NSW this year.

Unfortunately along with desirable species, weed species such as serrated tussock are also in abundance.

Infestations of serrated tussock pose a new threat as trials indicate that the plant burns with an intensity up to seven times greater than native grasslands. Many people may not realize the affect this has on the frequency and intensity of fires. This is a new threat from the weed that already causes major problems for land managers by reducing stock carrying capacity and to the environment by reducing grassland biodiversity.

With the fire season already well under way and

fire restrictions in force, landowners need to be aware of the added fire risk posed by weeds such as serrated tussock. A build up of seed heads creates an additional hazards to housing, sheds and roadsides, with the greatest risk area in the rural urban interface.

It is important for people living in rural bush land settings to be aware of the type of grasses around their homes, in the paddock and along the roadsides. Native grasses can reduce fire risks because they don't burn as fiercely as introduced species such as serrated tussock.

Bushfire Preparedness

Being prepared is a key to minimising the impacts of fire on your property and livestock. Landholders should take measures to reduce the fire hazard on and surrounding their property. The Rural Fire Service (RFS) has a vast amount of information on hazard reduction which can be found on their website www.bushfire.nsw.gov.au. Landholders should also ensure that any fire fighting equipment they intend to use is adequate and operational and that emergency plans are in place. Contact details for your local brigade should also be handy.

This information is taken from "Bushfire preparedness" published by the NSW DPI.

A wise man once told me:

- Tussock control is not for the Weeds Officer. It is for us and our kids.
- Serrated tussock is easy to kill. Getting started is the hard part.
- There is no "no-cost" weed control.
- The only good serrated tussock is a dead serrated tussock.
- Once is not enough. We have to keep looking around our paddocks for the ones that 'got away'.
- A vigorous weed needs a vigorous response.

STOP PRESS

The draft Serrated Tussock Strategic Plan has been released for public comment. It creates a framework to better coordinate management of serrated tussock across Australia.

Bronwen Wicks, National Serrated Tussock Coordinator, is happy to answer questions, clarify anything that is unclear or give a broader context to what the strategy is trying to achieve. She can be contacted on (02) 4828 6632 or email: bronwen.wicks@industry.nsw.gov.au

To view the draft Plan and make comment go to: www.weeds.org.au/WoNS/serratedtussock/

Environmental impacts of serrated tussock

Lake Bathurst and The Morass

Much is documented on the agricultural impacts of serrated tussock (*Nassella trichotoma*), however the environmental impacts are not as well documented. Serrated tussock impacts greatly on native flora and fauna through its invasive nature and ability to form dense monocultures. Biodiversity is severely reduced with serious threats to native fauna and flora.



Serrated tussock is often confused with our native tussock species meaning it can go unnoticed in native grasslands and form dense infestations before identified. It is a key threat to native grasslands through its highly invasive nature and potential for spread.

Lake Bathurst and The Morass lies within the Southern Tablelands of NSW encompassing some 1350 hectares. It is recognised as a nationally important wetland under the Directory of Important Wetlands in Australia (DIWA) due to the diverse birdlife it can support. It is a unique site being a closed system of internal drainage leading from freshwater inputs (The Morass) to a terminal saline lake. The lake has been dry for over ten years and has been used for grazing. It is estimated serrated tussock now covers over 70% of the lake bed and has established on many neighbouring properties.

Much of the native grasslands and associated fauna at Lake Bathurst have been diminished by serrated tussock invasion. Threatened plants include Creeping Hopbush (*Dodonaea procumbens*), Round-leafed Wilsonia (*Wilsonia rotundifolia*), Silky Swainson-pea (*Swainsona sericea*) & native pelargonium, (*Pelargonium* sp.) As these are all low growing plants, serrated tussock could potentially smother these species.

Four bird species, Banded Lapwing (*Vanellus tricolor*), Pacific Golden Plover (*Pluvialis fulva*),

Australasian Pipit (*Anthus novaeseelandiae*) and White-fronted Chat (*Epthianura albifrons*) are of special interest at Lake Bathurst and are affected by the extensive stands of serrated tussock. The birds all require relatively sparse vegetation for feeding areas, so dense stands of serrated tussock largely exclude these species.

The ability of serrated tussock to easily invade bare ground and form dense infestations is restricting the foraging and nesting grounds of these species.

Invasive weeds such as serrated tussock are a threat to other endangered grassland fauna, such as the Striped Legless Lizard (*Delma impar*) and the Grassland Earless Dragon (*Tympanocryptis pinguicolla*).

The impact serrated tussock has on fauna is through its invasion of native grasslands and other vegetation communities. To provide suitable habitat for fauna, native grasslands need to provide both shelter from the elements and predators, and food. A diverse range of species and their structure within the grassland enhances the available food and shelter. Serrated tussock simplifies the structure and composition of native grasslands and reduces their value as habitat for native fauna. Being unpalatable it is often not grazed by herbivores, such as macropods and introduced animals, which puts an increased pressure on remaining grasses.

To significantly improve the situation for native flora and fauna, large-scale measures of serrated tussock control are required. A joint project with WetlandCare Australia, the Hawkesbury-Nepean CMA, the Land and Property Management Authority and local landholders aims to reduce the impacts of serrated tussock at Lake Bathurst. Once sites with rare plants are mapped and protected, area-wide measures against serrated tussock can begin. A containment line is being used by treating serrated tussock at the margins of the lake and within the open areas where it is starting to get a foothold. It is hoped flooding will take care of the tussock on the lake bed. As everyone knows, long term integrated management is the only way to control this highly invasive weed.

Article by Michael Pattison Regional Coordinator,
WetlandCare Australia



Protecting Namadgi National Park, ACT

The worst infestation of serrated tussock in the ACT is up on the northern Clear Range - adjoining Namadgi National Park. This is a rugged area at about 1,300m. Serrated tussock has smothered large areas of the understorey in the Broad-leaved Peppermint and Candlebark - Mountain Dry Forest.

Both NSW and ACT landholders are spraying the serrated tussock in the areas on their main grazing paddocks in the valleys, but needed help with the remote area weed control high up on the range. This is where Rangers from ACT parks and Conservation are helping. Rangers and contractors are spraying serrated tussock on some of the most infestations on high peaks. These are being targeted as they are a threat to Namadgi National Park and neighbouring areas in NSW.



Steve Taylor

Serrated tussock plants (stained with red dye) that have been sprayed with herbicide in Broad-leaved peppermint and Candlebark - Mountain Dry Forest on the northern Clear Ranges next to Namadgi National Park.

Native Grasslands

Being similar in appearance to many native tussock grasses, serrated tussock is able to go unnoticed in native grasslands for many years until significant infestations have developed. Conversely, valuable native grasses can be mistaken for serrated tussock and inadvertently killed.

Native grasslands are one of Australia's most threatened ecosystems. Less than one per cent of their original extent remains and these are in various stages of degradation throughout south-east Australia.

Often high quality native grasslands are small, remnant areas occurring where human land use has not had a significant effect. Serrated tussock is a key threat to native grasslands. Being very similar in appearance to many of temperate Australia's native grasses, it is able to go unnoticed in grasslands for many years. Unfortunately by the time it is recognized, the native grasses have been replaced by significant infestations of serrated tussock.

Serrated tussock has already invaded many of temperate south-eastern Australia's most endangered native grassland remnants and its

presence is a serious threat to the native flora and fauna of these grasslands.

While serrated tussock is mostly a problem reducing the biodiversity values of native grasslands, it can also invade other environmentally significant areas such as dry coastal vegetation, grassy woodlands and sclerophyll forests.

Native grasses that are often confused with serrated tussock include:

- ◆ Poa/silver tussock (*Poa labillardieri*)
- ◆ Snow grass (*Poa sieberiana*)
- ◆ Red anther wallaby grass (*Joycea pallida*)
- ◆ Spear grass (*Austrostipa* spp.)
- ◆ Wallaby grass (*Austrodanthonia* spp.)
- ◆ Kangaroo grass (*Themeda triandra*)

This information is taken from "Serrated Tussock - National best practice manual" published by the Victorian Department of Primary Industries.

Distinguishing serrated tussock from similar native grasses

Meredith Mitchell



Wallaby grass (*Austrodanthonia* spp.).

Leaf blade is folded in the bud and there are parallel veins of thickening on the leaf blade. Distinguishing features: fine leaves; grows all year; hairy ligules; seedhead has a fluffy appearance at maturity.

Spear grass (*Austrostipa* spp.).

A coarse tufted grass that remains green all year. Distinguishing features: leaves are rough to touch and are covered in miniature hairs; the seed has a long awn with a corkscrew twist (up to 6 cm long).



Meredith Mitchell

Meredith Mitchell



Poa/silver tussock (*Poa labillardierei*).

Seedheads are open and pyramid shaped. Distinguishing features: channelled leaf blade; grows on lower slopes and valley floors. *Poa sieberiana* (snow grass) - Leaves are usually in rolled. Seedhead is pyramid shaped. Distinguishing features: grey-green leaves; grows on mid slopes to ridges-areas that are well drained.

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The Serrated Tussock Working Party for NSW and ACT, in partnership with Mid-Western Regional Council have been funded under the NSW Noxious Weeds Grant program for a project to support more effective coordination and strategic management of serrated tussock across NSW. Tussock Talk is one initiative of this project. It aims to share information and support land managers to continue the battle against serrated tussock. Tussock Talk is produced quarterly and we welcome your feedback. Please feel free to share this publication by distributing it widely.

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