Nassella neesiana 简体中文 正體中文

System: Terrestrial

Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Liliopsida	Cyperales	Poaceae

Common name Chilean needle grass (English)

Synonym *Stipa neesiana* , Trin. & Rupr.

Similar species *Nassella trichotoma, Nassella charruana, Nassella hyalina, Nassella lecotricha, Nassella tenuissima*

Summary Nassella neesiana (Chilean needle grass) threatens the ecological integrity of affected natural ecosystems and also causes significant devastation in agricultural areas due to the reduction in pasture palatability and also direct damage to stock.

view this species on IUCN Red List

Species Description
Perennial tussock forming C3 grass of up to 1m high. Flat leaves 1-5mm diameter, strongly ribbed on adaxial surface with rough margins. Infloresence an open panicle; stem seeds (cleistogenes) are also produced (Gardner, 1998).

Notes
Nassella neesiana was previously known as *Stipa neesiana*. It is difficult to distinguish from native Stipas.

Lifecycle Stages
Peak flowering of Chilean needle grass in Australia occurs between November and February (Gardner, 1998), however it has the ability to flower all year round (Ens, 2002). The seed bank has been estimated to potentially persist in the soil for up to 12 years even with annual glyphosate application (Bourdot and Hurrell 1992)!

Uses
Good stock feed during winter only

Habitat Description
In Australia it invades disturbed grasslands and grassy woodlands of temperate regions with more than 500mm rainfall (Gardner, 1998)

Reproduction
Reproduces by sexual (chasmogamous) and asexual (cleistogamous) seed production. The cleistogenes are formed in the leaf sheaths and culms while the chasmogenes are found in the infloresence (Gardner, 1998). Up to 22,000 chasmogamous seeds/plant/year can be produced (Bourdot and Hurrell 1992). Production of the asexual seeds is a common response following slashing, grazing or fire (Gardner, 1998).

General Impacts
Nassella neesiana has the tendency to replace native flora (Agriculture and Resource Management Council of Australia and New Zealand *et al*., 2000; Ens, 2002), reduce ant abundance and alter the entire invertebrate community composition in conservation areas (Ens, 2002). Potential distribution overlaps an array of threatened species in Australia (Thorpe and Lynch, 2000). Agricultural productivity is thwarted by the replacement of palatable ground cover, injury to stock, reduction of produce quality and increased management costs (Thorpe and Lynch, 2000). Some sheep graziers in eastern Australia have been forced to switch to beef production (Thorpe and Lynch, 2000).

Management Info
Preventative measures: A combination of chemical, mechanical, rehabilitation, competition, grazing management, biological control techniques and hygiene regimes are required to eradicate Chilean Needle Grass (Agriculture and Resource Management Council of Australia and New Zealand *et al*., 2000). As yet there is an absence of an effective herbicide (Agriculture and Resource Management Council of Australia and New Zealand *et al.* 2000).

Principal source:

Compiler: Emilie-Jane Ens, PhD candidate University of Wollongong, Australia.

Review: Emilie-Jane Ens, PhD candidate University of Wollongong, Australia.

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ALIEN RANGE

[1] AUSTRALIA

[1] NEW ZEALAND

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Managment information
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Summary: Available from: http://www.weeds.gov.au/publications/guidelines/wons/n-neesiana.html [Accessed 23 October 2008]
Gardner, M. R. and Sindel. B. M. 1998. The biology of Nassella and Achnatherum species naturalized in Australia and the implications for management on conservation lands. *Plant Protection Quarterly* 13(2): 76-79
Summary: In-text reference&#65533;Gardner and Sindel, 1998

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Bourdot, G. W. and Hurrell, G. A. 1992. Aspects of the ecology of *Stipa neesiana* seeds. *New Zealand Journal of Agricultural Research*.32: 317-326
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Gardner, M. R. 1998. The biology of *Nassella Neesiana* (Trin. & Rupr.) Barkworth (Chilean needle grass) in pastures on the northern tablelands of New South Wales: weed or pasture? PhD thesis. The University of New England
Summary: In-text reference&#65533;(Gardner, 1998)
ITIS (Integrated Taxonomic Information System), 2005. Online Database *Nassella neesiana*
Summary: An online database that provides taxonomic information, common names, synonyms and geographical jurisdiction of a species. In addition links are provided to retrieve biological records and collection information from the Global Biodiversity Information Facility (GBIF) Data Portal and bioscience articles from BioOne journals.
Available from: http://www.cbif.gc.ca/pls/itisca/taxastep?king=every&p_action=containing&taxa=Nassella+neesiana&p_format=&p_ifx=plglt&p_lang= [Accessed March 2005]