



Note Number: LC0263

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Mexican feather grass: State Prohibited Weed

Common name(s)

Mexican feather grass, Texas tussock grass, white tussock, ponytail grass.

Botanical name(s)

Nassella tenuissima (Trin.) Barkworth.

Synonym(s): *Stipa cirrosa* E.Fourn. ex Hemsl., *Stipa geniculata* Phil., *Stipa mendocina* Phil., *Stipa oreophila* Spreg., *Stipa subulata* E.Fourn. ex Hemsl., *Stipa tenuissima* Trin., *Stipa tenuissima* var. *oreophila* (Speg.) Speg., *Stipa tenuissima* var. *planicola* Speg.

Family: POACEAE



Figure 1. Mature Mexican feather grass plant.

Declaration status

Mexican feather grass is declared under the *Catchment and Land Protection Act 1994* (CaLP) as a State Prohibited Weed. These weeds either do not occur in Victoria, or are present and can reasonably be expected to be eradicated. State Prohibited is the highest category in which a noxious weed can be declared, reflecting the significant threat that these species pose to the State of Victoria.

It is illegal to buy, sell, possess for sale, display, plant, propagate, deposit onto land, bring into or transport around Victoria a noxious weed, seeds of a noxious weed, or any part of the plant capable of growing.

Origin and distribution

Mexican feather grass is indigenous to central and south America. It has been cultivated in the United States of America and New Zealand and has now naturalised in both New Zealand and South Africa.

The species was first detected in Victorian plant nurseries during December 1998. These plants had been inadvertently imported by mail order from Great Britain under the species' synonym name *Stipa tenuissima*. Mexican feather grass has previously been found growing in six locations in Victoria.

The Department of Primary Industries (DPI) continues to monitor all known sites of Mexican feather grass to ensure this serious weed is eradicated from Victoria.

Description

A densely tufted perennial tussock grass in the spear-grass group (Tribe Stipeae), growing to about 70 cm high; very similar to serrated tussock (*Nassella trichotoma*).

Stems – culms (flower stems) to 70 cm high, with 2 to 3 unthickened nodes; smooth, hairless and round in cross section. The flower-bearing section of the culm is 15 to 25 cm long and green or purplish in appearance. A leaf-like sheath encloses the lower section. Unlike serrated tussock, the flowering stem apparently does not break at the uppermost stem node when mature.

Leaves – very numerous; tightly inrolled so that the edges overlap, thread-like, 0.25 to 0.5 mm in diameter, to about 60 cm long; the outer surface minutely roughened, with a ligule (a small appendage on the inner side of the leaf where it sheaths the stem) 0.5 to 2.5 mm long, opaque, papery and usually smooth and hairless. The leaves roll smoothly between the fingers like a needle.

Flowers – a single, bisexual floret per spikelet, surrounded by two persistent glumes that are unequal in size and much longer than the floret (excluding the awn). The lower glume is 9 to 10.5 mm long (6 to 8.5 mm in serrated tussock, 14 to 24 mm in Chilean needle grass). Unlike serrated tussock, the flower head is often only partly exerted and spread from the enclosing sheath at maturity.



Figure 2. (left) Small tussock in flower.

Figure 3. (above right). Seeds readily attach to clothing.

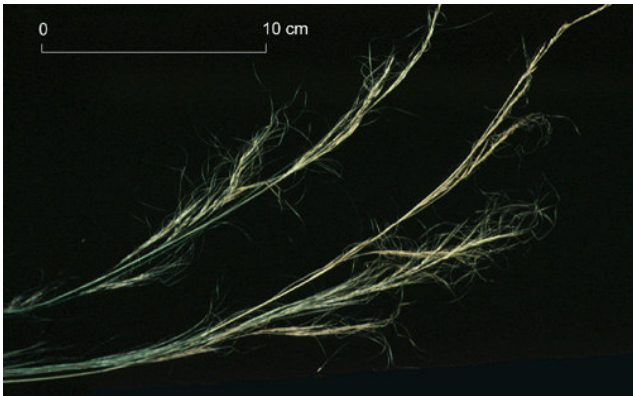


Figure 4. Flowering heads of Mexican feather grass.

Seeds – the awn (the long bristle-like appendage extending from the end of the seed) is 4.5 to 9 cm long (2 to 3.5 cm in serrated tussock and 6 to 9 cm long in Chilean needle grass) and is not readily detached from the seed. The main body of the seed is 2 to 3 mm long (1.5 to 2 mm long in serrated tussock, 8 to 10 mm long in Chilean needle grass). The summit of the seed lacks a conspicuous cylindrical corona or collar around the base of the awn.

Roots – wiry, fibrous.

Similar species

Five species of *Nassella* are naturalised in Victoria:

N. trichotoma (Nees) Hack. ex Arechav., serrated tussock

N. neesiana (Trin. & Rupr.) Bark., Chilean needle grass

N. hyalina (Nees) Barkworth, cane needle grass

N. leucotricha (Trin. & Rupr.) Pohl, Texas needle grass

N. charruana (Arechav.) Bark., lobed needle grass

Serrated tussock and Mexican feather grass both lack a corona at the junction of the seed and the awn, a structure present in the other four species. The awn of Mexican feather grass attaches centrally to the seed whereas that of Serrated tussock is offset in its attachment. Refer to the key of Jacobs *et al.* (1998) to assist in identification of these other *Nassella* species.

Life Cycle

Reproduction is by seed. Flowering is reported to mainly occur in summer, but also in spring and autumn. Seed is formed following flowering, and germination may occur year round under suitable conditions.

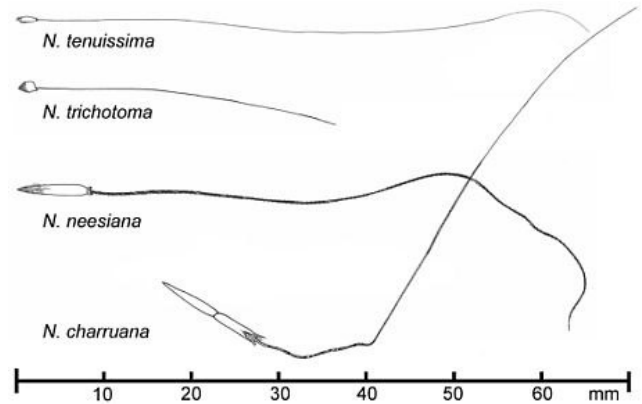


Figure 5. Seeds of Mexican feather grass (*N. tenuissima*), Serrated tussock (*N. trichotoma*), Chilean needle grass (*N. neesiana*) and lobed needle grass (*N. charruana*).

Dispersal

The seeds tend to fall nearby the plant and are not usually wind dispersed. The seeds do however readily attach to vectors such as clothing and equipment which aid in long distance dispersal.

General

Mexican feather grass is a potentially serious new weed to Australia. The species is closely related to serrated tussock, widely regarded as the worst pasture weed in Australia, and has the potential to occupy a far greater range of territory. Mexican feather grass could spread through eastern Australia as far as southern Queensland, and has the potential to cause major economic and environmental damage. Although no naturalised populations are known to exist in Victoria the species has recently been offered for sale by a number of nurseries in Victoria and New South Wales.

Management

DPI is responsible for the control and eradication of all State Prohibited Weeds. Any person who believes they have located the sale or an infestation of Mexican feather grass regardless of the area, should notify a DPI Weed Alert Contact Officer (telephone 136 186). Please do not attempt to control or dispose of this weed yourself, or communicate with any person suspected of displaying, planting, propagating or selling this species.

Further References

- Jacobs, S.W.L., Everett, J. and Torres, M.A. (1998) *Nassella tenuissima* (Gramineae) recorded from Australia, a potential new weed related to serrated tussock. *Telopea* 8(1), 41-46.
- McLaren, D.A., Whattam, M., Blood, K., Stajsic, V. and Hore, R. (1999). Mexican feather grass (*Nassella tenuissima*) a potential disaster for Australia. *12th Australian Weeds Conference Papers and Proceedings*, Sept., pp. 658-662.

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