Nassella hyalina

Scientific Name

*Nassella hyalina* (Nees) Barkworth

Synonyms

*Stipa hyalina* Nees

Family

Gramineae (South Australia)
Poaceae (Queensland, New South Wales, the ACT, Victoria, Tasmania, Western Australia and the Northern Territory)

Common Names

cane needle grass, cane needlegrass, spear grass

Origin

Native to southern South America (i.e. southern Brazil, Argentina and Uruguay).

Naturalised Distribution

Locally naturalised in southern Victoria and some inland parts of eastern New South Wales.

Habitat

A potential weed of temperate, semi-arid and sometimes also drier sub-tropical environments. It usually grows in pastures, grasslands, open woodlands, waste areas, disturbed sites and along roadsides.

Habit

A tufted long-lived (i.e. perennial) grass with upright (i.e. erect or ascending) stems growing 25-120 cm tall.

Distinguishing Features

- A tufted long-lived grass with upright stems growing 25-120 cm tall.
- Its linear leaves (1.5-5 mm wide) are either flat or rolled inwards.
- Its seed-head is usually an open panicle (5-30 cm long) with many flower spikelets that are borne singly.
- These flower spikelets are elongated in shape (5-12 mm long) and topped by a relatively large twisted awn (20-45 mm long).
- The mature seed has a tiny membranous structure (less than 1 mm long) where the awn attaches to the top of the seed.
- It also produces 'stem seeds' inside the leaf sheaths.

Stems and Leaves

The flowering stems (i.e. culms) are upright (i.e. erect or ascending) and sparsely branched, while most of the leaves are tufted around the base of the plant.

The leaves are long and narrow (i.e. linear) and have a hairless (i.e. glabrous) sheath which surrounds the stem. The leaf blades (4-30 cm long and 1.5-5 mm wide) are flat or rolled inwards (i.e. involute or convolute) and taper to a pointed tip (i.e. acuminate apex). Where the leaf sheath meets the leaf blade there is a small membranous structure (i.e. ligule) 0.2-2 mm long. The leaves are also somewhat rough to the touch (i.e. scabrous).

Flowers and Fruit

The seed-head (5-30 cm long) is an open, or sometimes spike-like (i.e. spiciform), panicle. Small flower spikelets are borne singly at the tips of the branches of the seed-heads, and each flower spikelet consists of two bracts (i.e. glumes) and a single tiny flower (i.e. floret). These flower spikelets (5-12 mm long) are elongated or cylindrical (i.e. lanceolate or terete) in shape and are topped by a long awn.

When mature the 'seed' separates from the bracts (i.e. glumes), which remain on the seed-head branches. The mature 'seed' has a sharpened, hairy tip (i.e. pubescent callus) at one end and a long twisted awn (20-45 mm long) at the other end. Where the awn attaches to the seed there is a tiny membranous, collar-like structure (i.e. corona) about 0.5-1 mm long. Hidden within the hard-coated 'seed' is the small spindle-shaped (i.e. fusiform) and dark brown-coloured grain (about 2 mm long). This plant also produces stem seeds (i.e. cleistogenes) at the stem joints (i.e. nodes), which are usually concealed inside the leaf sheaths.
Reproduction and Dispersal

This species reproduces via aerial seeds and also produces stem seeds (i.e. cleistogenes).

The aerial seeds readily become attached to animals, clothing and vehicles. Both types of seeds may also be dispersed in contaminated agriculture produce (e.g. fodder) and soil.

Environmental Impact

Cane needlegrass (Nassella hyalina) is on the Alert List for Environmental Weeds, a list of 28 introduced plants that are currently not very widespread but are considered to pose a threat to Australia’s environment.

Legislation

This species is declared under legislation in the following states and territories:

- South Australia: 1 - this species is declared under Class 1c(i), a classification for prohibited terrestrial plants. Its presence must be notified and the plant must be destroyed (throughout the entire state).
- Western Australia: Unassessed - this species is declared in other states or territories and is prohibited until assessed via a weed risk assessment (throughout the entire state).

Similar Species

Cane needlegrass (Nassella hyalina) is very similar to lobed needlegrass (Nassella charruana), Chilean needlegrass (Nassella neesiana), Texas needlegrass (Nassella leucotricha) and short-spined needlegrass (Nassella megapotamia). These species can be distinguished by the following differences:

- cane needlegrass (Nassella hyalina) has seeds with relatively short awns (20-45 mm long) and a short corona (less than 1.5 mm long). Its flower spikelets are relatively small (5-12 mm long) and it produces stem seeds (i.e. cleistogenes).

- lobed needlegrass (Nassella charruana) has seeds with relatively long awns (more than 45 mm long) and a long corona (5-6 mm long). Its flower spikelets are relatively large (16-20 mm long) and it does not produce stem seeds (i.e. cleistogenes).

- Chilean needlegrass (Nassella neesiana) has seeds with relatively long awns (more than 45 mm long) and a short corona (less than 1.5 mm long). Its flower spikelets are relatively large (10-22 mm long) and it produces stem seeds (i.e. cleistogenes).

- Texas needlegrass (Nassella leucotricha) has seeds with relatively long awns (more than 45 mm long) and a moderately-sized corona (1.5-2.5 mm long). Its flower spikelets are relatively large (10-17 mm long) and it produces stem seeds (i.e. cleistogenes).

- short-spined needlegrass (Nassella megapotamia) has seeds with relatively long awns (more than 45 mm long) and a short corona (less than 1.5 mm long). Its flower spikelets are relatively small (7-10 mm long) and it does not produce stem seeds (i.e. cleistogenes).

Several other introduced grasses are relatively similar. These include serrated tussock (Nassella trichotoma), Mexican feathergrass (Nassella tenuissima), broad kernel espartillo (Amelichloa caudata), narrow kernel espartillo (Achnatherum brachychaeta), plumerillo (Jarava plumosa) and Uruguayan ricegrass (Piptochaetium montevidense). None of these species have collars (i.e. coronas) on their seeds.

In addition, several native tussock-forming grasses can look similar (e.g. Poa spp. and Austrostipa spp.). However, these species either lack ligules on their leaves, or have ligules that are fringed with hairs, and they also do not have collars (i.e. coronas) on their seeds.

Note: This page only covers those grasses that are commonly confused with this species. For a more in-depth key to all of the grasses present in Australia, see the AusGrass: Grasses of Australia CD-ROM or Flora of Australia, Volumes 43 and 44.