

Identification of Chilean needle grass, *Nassella neesiana* – a Weed of National Significance

Linda J. Iaconis

Catchment and Agriculture Services, Department of Primary Industries, PO Box 48, Frankston, Victoria 3199, Australia

Summary Chilean needle grass (CNG), *Nassella neesiana* (Trin. & Rupr.) Barkworth), is a Weed of National Significance (WONS), as it is possibly the worst environmental weed threatening endangered indigenous grasslands in south-eastern Australia. Grasses are amongst the more difficult plant groups to identify, even for well-trained botanists. Identification consequently becomes a management issue. How can one control a species if one doesn't know what the offender looks like? The information presented in the paper below can assist Government officers, community groups and other land managers to positively identify this serious weed.

Keywords Chilean needle grass (CNG), *Nassella neesiana*, Weed of National Significance.

DISCUSSION

Vegetative features When not in flower, *Nassella neesiana* (Trin. & Rupr.) Barkworth (known as Chilean needle grass – CNG) may be identified by its vegetative features. It is a perennial grass up to 1.2 m high. CNG does not have a pronounced tussock habit; rather it tillers profusely, producing many shoots from the base that form a wide untidy tussock excluding other plants. Leaves are sparsely hairy and flat or somewhat inrolled, to 30 cm long and 5 mm wide. They are harsh to touch, particularly in one direction, due to the marginal hairs. At the junction of the leaf blade and leaf sheath, is a 3 mm long smooth membranous ligule, which extends across the leaf base and is bordered by two small tufts of erect hairs either side which are easily seen when the leaf is pulled away from the stem.

Sexual features The easiest time to identify CNG is between October and April when it is flowering and

setting seed. Two types of seeds are produced during this period: panicle ('normal' seeds) and cleistogenes (stem seeds). Normal seeds are produced on tall panicles that have a distinct purplish colour. The awns of CNG are 60 to 90 mm long and become twisted together at maturity to form a tangled mass. At the junction of the awn and the lemma (outer seed layer), there is a characteristic raised crown 1 to 1.5 mm long with small teeth, known as a corona, encircling the base of the awn. Cleistogenes are formed at the nodes (swellings along the stem that give rise to leaves) and are covered by the leaf sheaths of the flowering stems.

For further information on the identification of CNG, refer to Gardener (1999), Liebert (1996), Muyt (2001) and Walsh (1998).

ACKNOWLEDGMENTS

National CNG extension is supported by the Natural Heritage Trust of the Department of Agriculture, Fisheries, Forestry, Australia (DAFF).

REFERENCES

- Gardener, M. (1999). 'Landcare Notes: Chilean needle grass identification'. (Keith Turnbull Research Institute, Department of Natural Resources and Environment, Frankston).
- Liebert, A. (1996). 'Chilean needle-grass: *Stipa neesiana* – assessment report to the North Central CALP Region'. (Department of Conservation and Natural Resources, Victoria).
- Muyt, A. (2001). 'Bush invaders of south-east Australia'. (R.G. and F.J. Richardson, Melbourne).
- Walsh, N. (1998). Identification of South American tussock weeds. *Plant Protection Quarterly* 13, 59-62.