Calamagrostis arenaria

COMMON NAMES
marram grass

BIOSTATUS
Exotic

CONSERVATION STATUS
Not applicable

CATEGORY
Vascular

STRUCTURAL CLASS
Grasses

FLOWER COLOURS
Green, Yellow

DETAILED DESCRIPTION
Stout rhizomatous perennial grass forming compact tufts, 1 m+ tall. **Rhizomes** tough, creeping long distances in loose sand. **Leaves** to 700 × 3–6 mm, greyish-green, tips sharp, reddish-brown sheaths overlapping; blades tightly rolled (appear cylindrical) in exposed conditions, loosely rolled in shade; densely hairy ribs above, striped below, narrow ligule 25 mm long. **Seedhead** a dense spike, whitish, to 30 cm long.

SIMILAR TAXA
Leymus racemosus is more robust, foliage less bluish. *Poa billardierei* native sand tussock can be confused with small marram plants.

HABITAT
Terrestrial. Coastal plant, usually occurs on sand dunes; can occur in inland sites with low fertility.

GENUS
Calamagrostis

FAMILY
Poaceae

AUTHORITY
Calamagrostis arenaria (L.) Roth

SYNONYMS
Ammophila arenaria

ENDEMIC FAMILY
No

FLOWERING
November, December, January, February, March

FRUITING
Unknown

YEAR NATURALISED
1873

ORIGIN
Europe, North Africa

Marram. Photographer: John Barkla, Licence: CC BY.

Warrington, Otago. Photographer: John Barkla, Licence: CC BY.

REASON FOR INTRODUCTION
Agricultural (to stabilise sand dunes which had mobilised once native vegetation had been removed).

TOLERANCES
Highly tolerant to drought and is virtually unpalatable to grazing stock. Intolerant of shade.

LIFE CYCLE AND DISPERSAL
Perennial. Can spread large distances via seed. Low amounts of seed are produced. Seed viability is low, with no contribution to the seed bank. Vegetative reproduction occurs rapidly through extensive rhizomatic growth. The plant achieves this by trapping sand and growing through it, changing how natural sand dunes are formed, in contrast to native pīngao (*Ficinia spiralis*) which holds and releases sand more readily to resupply beaches. Seed is dispersed by wind. Direct spread from extending rhizomes, seed and rhizome fragments spread by wind and water, deliberate planting by people for sand dune stabilisation.

PROPAGATION TECHNIQUE
Rooted pieces of rhizome.

ETYMOLOGY
calamagrostis: After Kalamos, a Greek mythical figure who was turned into a reed, and agrostis, a Greek word for 'grass' from agrotes 'of the field'.
arenaria: Sand dweller

ENVIRONMENTAL WEED (2024)
This plant is named in a list of 386 environmental weeds in New Zealand 2024 prepared by DOC. 759 candidate species were considered for inclusion on this new comprehensive list of environmental weeds in New Zealand. The species considered were drawn from published lists of weed species, lists of plants that must be reported or managed by law if observed, existing national and regional programmes and agreements for pest management, and species already managed by the Department of Conservation (DOC). Candidate species were then assessed to see if they were fully naturalised and whether they have more than minor impacts in natural ecosystems. Read the full report here.

NVS CODE
AMMARE

REFERENCES AND FURTHER READING
Peterson, P.M.; Soreng, R.J.; Romaschenko, K.; Barberá, P.; Quintanar, A.; Aedo, C.; Saarela, J.M. 2022: Phylogeny and biogeography of Calamagrostis (Poaceae: Pooideae: Poeae: Agrostidinae), description of a new genus, Condilorachia (Calothecinae), and expansion of Greeneochloa and Pentapogon (Echinopogoninae). Journal of Systematics and Evolution 60(3): 570–590. (Published online: May 2022)

MORE INFORMATION
https://www.nzpcn.org.nz/flora/species/calamagrostis-arenaria/

PDF DATE
25 May 2026