Cenchrus macrourus 简体中文 正體中文

System: Terrestrial

Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Liliopsida	Cyperales	Poaceae

Common name

Synonym

Pennisetum quartinianum , A. Rich
Pennisetum angolense , Rendle
Pennisetum giganteum , A. Rich.

Similar species

Summary

Cenchrus macrourus (*Pennisetum macrourum*) is a 1 to 1.8 metre erect perennial grass native to South Africa. It has been introduced to New Zealand and Australia, where it has established and is known to replace desirable stock grass with grass of low palatability in pastoral areas.

view this species on IUCN Red List

Species Description

African feather grass is a perennial grass which grows up to two metres high and resembles pampas grass. Native to South Africa (Environment Waikato Regional Council 2002) this tussock-forming and rhizomatous grass forms an extensive fibrous root system to a metre in depth. Stout rhizomes may develop reaching two metres in length and reaching downwards approximately one metre in depth. The leaves of *C. macrourus* are light green to dark underneath with occasional bluish-purple edges (Greater Wellington Regional Council 2002). The leaves of the plant may arise from the base of the plant, or from erect, cylindrical stems. The leaves grow to 1.2m long, and are 10 - 13 millimetres wide. Ribbing is pronounced on the upper surface. They are slightly curved in cross-section, and the edge has tangible serrations (Australian Department of Primary Industries and Water 2002).
African Feather Grass produces a long, thin flower head (\"inflorescence\"), in late spring to summer. It ranges from 75 - 300 millimetres long, and 10 - 20 millimetres in diameter. Prominent bristles protrude out from the stem of the inflorescence (approximately 1 centimetre long). Seeds are released in late summer and autumn and are yellow - brown in colour and 5 - 7 millimetres long. They have a number of tiny barbed bristles attached to them, allowing them to easily lodge in animal fur and wool. (Australian Department of Primary Industries and Water 2002).
Please note that in comparison to pampas grass, feather grass may be distinguished by its distinctive long, thin inflorescence and by its smaller more compact flowerhead/spikelets. Also, African feather grass often gets confused with pampas grass and toetoe. To distinguish between the three: African feather grass produces a narrow flower spike, while pampas and toetoe produce fluffy flower heads; African feather grass has a hairy leaf sheath where as pampas and toetoe don’t (Environment Canterbury 2003).

Notes
Cenchrus macrourus is also referred to as *Pennisetum macrourum*
Feather grasses have clusters of feather-like spiklets and belong to the grass family (a large and widespread family of plants - the Gramineae or Poaceae); these are characterised by hollow stems, sheath-forming leaves in two longitudinal rows, and minute flowers arranged in spikelets. A spikelet is a small or secondary spike, characteristic of grasses and sedges, having a varying number of reduced flowers each subtended (underlying, enclosing and surrounding) one or two scale-like bracts. The grasses include important food plants such as wheat, rice, corn, barley, oats, and sorghum and also plants for turf and fodder (The American Heritage® Dictionary of the English Language: Fourth Edition 2000).
Please follow these links to view the profile of a related species buffel grass (*Cenchrus ciliaris*; kikuyu grass *Cenchrus clandestinus*; feathery pennisetum *Cenchrus polystachios*; fountain grass *Cenchrus setaceus*; bur grass *Setaria verticillata*).

Uses
African feather grass is used as a landscape ornamental plant and is sometimes found in residental gardens, often around ponds (Environment Canterbury 2003).

Habitat Description
African feather grass (*Cenchrus macrourus* (*Pennisetum macrourum*)) invades poor pasture areas, roadside verges and reserves (Environment Waikato Regional Council 2002). The Australian Department of Primary Industries and Water (2002) reports that the plant is mainly found along roadsides, waste areas, banks of small creeks and rivers and areas with moisture ability. It occasionally invades poorly maintained pasture. Young plants exhibit a great need for a constant supply of moisture, however, mature well-established plants are capable of with-standing long periods of drought.
Apparently in New Zealand African feather grass prefers to grow in damp places such as ponds, river systems, coastlines, estuaries and gullies. However it can also be found in bare sand, low shrubland and dry and disturbed forest (Environment Canterbury 2003).
While it mainly colonises road sides, river-banks and waste areas (where adequate moisture is available) it requires full sunlight. Rarely will dense infestation occur within a shady bush-land or forest environment (Australian Department of Primary Industries and Water 2002).

Reproduction
African feather grass spreads by seed and vegetative material, that is by one metre long stout rhizomes. (In Australia the plant spreads mainly by vegetative means). In this process small plantlets develop along its length which, much like strawberries produce runners, are used as reproductive organs (Department of Primary Industries (DPI) Victoria 2008).

General Impacts
African feather grass *Cenchrus macrourus* (*Pennisetum macrourum*) has an extensive root system making it a difficult species to remove. It produces a large amout of seeds which are easily dispersed by wind and can be carried on clothing. This means *C. macrourus* can be distributed to distant places where it may be difficult to control the species. It spreads quickly, crowding out native low growing plant species. It is also a fire hazard, can block waterways and prevent site access.

C. macrourus has the potential to become a major weed of production forestry, roadsides, coastlines, wetlands, amenity and urban areas in New Zealand according to Environment Bay of Plenty Regional Council (2005).

Management Info
An integration of preventative and control methods is critical in combating African feather grass infestations. Additional follow-up inspections of the infested region should also be regularly carried out. At present, a number of methods are available in controlling the spread of *P . macrourum*.
Preventative measures : Plantation of appropriate shrubs or trees may directly compete with the African feather grass for nutrients, water and light, and hence help with the ongoing management programs (DPIW, 2002).
Physical: Mechanical control such as excavation can be achieved with the use of a spade or excavator depending on the size of the infestation. It is important to ensure the complete removal of soil at the level of the rhizomes to prevent regeneration and regrowth (DPIW, 2002). Cultivation may be another viable strategy, as it disrupts the rhizome system, causing the sprouting of buds, which ultimately exhausting the plant of its energy (DPIW, 2002).
Chemical: Chemical control using herbicides may be the most effective form of management. Glyphosate and flupropanate are the most commonly used herbicides. Best time for herbicide application is from late spring to early autumn. Furthermore, the herbicide should completely cover the foliage to ensure effectiveness. It may be useful to first slash or burn away the plant material prior to application.

Pathway

Principal source:

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[16] AUSTRALIA
[1] SAINT HELENA
[10] NEW ZEALAND
[10] UNITED STATES

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