

*Cenchrus polystachios*  [简体中文](#) [正體中文](#)

**System:** Terrestrial

Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Liliopsida	Cyperales	Poaceae

**Common name** pwokso (Pohnpeian), missiongrass (English), o tamata (English, Fiji), mechen katu (Chuuk), West Indian pennisetum (English), feathery pennisetum (English), thin napier grass (English), queue de chat (French), dipw rais (Pohnpeian)

**Synonym**

*Cenchrus setosus* , Sw. 1788  
*Pennisetum setosum* , (Sw.) L. Rich.  
*Gymnotrix geniculata* , Schult. 1824  
*Panicum barbatum* , Roxb. 1820  
*Panicum cauda-ratti* , Schumach. 1827  
*Panicum cenchroides* , Rich. 1792  
*Panicum densispicum* , Poir. 1816  
*Panicum erubescens* , Willd. 1809  
*Panicum polystachion* , L. 1759  
*Panicum subangustum* , Schumach.  
*Panicum triticoides* , Poir. 1816  
*Pennisetum alopecuroides* , Desv. ex Ham. 1825  
*Pennisetum atrichum* , Stapf & C.E.Hubb. 1933  
*Pennisetum borbonicum* , Kunth 1830  
*Pennisetum cauda-ratti* , (Schumach.) Franch. 1895  
*Pennisetum elegans* , Nees ex Steud. 1854  
*Pennisetum erubescens* , (Willd.) Link 1827  
*Pennisetum flavescens* , J.Presl 1830  
*Pennisetum gabonense* , Franch. 1895  
*Pennisetum gracile* , Benth. 1849  
*Pennisetum hamiltonii* , Steud. 1841  
*Pennisetum hirsutum* , Nees 1829  
*Pennisetum indicum* , Murray var. *purpurascens* (Kunth) Kuntze 1891  
*Pennisetum nicaraguense* , E.Fourn. 1880  
*Pennisetum pallidum* , Nees 1829  
*Pennisetum polystachion* ,(L.) Schult. subsp. *setosum* (Sw.) Brunken 1979  
*Pennisetum polystachion* , (L.) Schult. subsp. *atrichum* (Stapf & C.E.Hubb.) Brunken 1979  
*Pennisetum purpurascens* , Kunth 1816  
*Pennisetum reversum* , Hack. ex Buettner var. *gymnochaetium* Hack. 1901  
*Pennisetum reversum* , Hack. ex Buettner 1890  
*Pennisetum richardii* , Kunth 1829  
*Pennisetum setosum* , (Sw.) Rich. 1805  
*Pennisetum sieberi* , Kunth 1829  
*Pennisetum stenostachyum* , Peter 1930  
*Pennisetum subangustum* , (Schumach.) Stapf & C.E.Hubb. 1933  
*Pennisetum tenuispiculatum* , Steud. 1854  
*Pennisetum uniflorum* , Kunth 1816  
*Setaria cenchroides* , (Rich.) Roem. & Schult. 1817  
*Setaria erubescens* , (Willd.) P.Beauv. 1812

**Similar species** *Pennisetum purpureum*, *Pennisetum pedicellatum*

## Summary

*Cenchrus polystachios* (*Pennisetum polystachion*) is a large grass species originating from Africa and India. It has spread to many Pacific islands and thrives in tropical climates. *C. polystachios* causes major problems in the Northern Territory of Australia, where it has greatly increased the amount of flammable material in the wooded savanna ecosystem, leading to greater devastation from bushfires.



[view this species on IUCN Red List](#)

## Species Description

Tufted annual or perennial **grass**; **culms** slender to moderately stout, up to 2m tall, usually 1-2m, simple or few-branched; **blades** 5-40cm long, 5-18mm wide, glabrous or pubescent; **spike** dense, yellow brown, 5-25cm long, 13-26mm wide; **spikelets** purple tinge, yellow-brown, surrounded by bristles, these densely hairy at base, unequal, one longer than the others but not greatly exceeding the next one or two shorter ones, 12-25mm long; spikelets 2-flowered c. 5mm long, upper floret perfect.

Judziewicz (1990) states that *C. polystachios* is perennial in the new world but annual in the old world.

## Notes

*Cenchrus polystachios* is also referred to as *Pennisetum polystachion*

## Uses

Originally introduced to many areas as a pasture or fodder grass for livestock.

## Habitat Description

Disturbed, mostly dry, lowland areas and cultivated fields up to 2100m elevation. Dominates dry hillsides in Guam and Fiji. Rarely extend beyond latitudes 23°N and 23°S.

## Reproduction

Seeds dispersed by wind, flowing water, or sticking to clothing. Can also reproduce through cuttings.

## General Impacts

Can act as a host for maize streak virus. Competes with native plant species. Alters the fire regime in areas of northern Australia, increasing the effect of bushfires. Has the potential to be a seed contaminant.

## Management Info

Preventative measures: [A Risk assessment of \*Cenchrus polystachios\* \(\*Pennisetum polystachion\*\)](#) for Australia was prepared by Pacific Island Ecosystems at Risk (PIER) using the Australian risk assessment system (Pheloung, 1995). The result is a score of 11 and a recommendation of: reject the plant for import (Australia) or species likely to be a pest (Pacific).

Chemical: Herbicides such as ametryn, paraquat, glufosinate ammonium, imazapyr and glyphosate isopropylamine have proved effective at preventing seed germination. Trials have shown that spraying with glyphosate and wetting agents during the plant's maximum growth phase is effective.

## Pathway

Introduced as a pasture grass for cattle. Seeds have been found transported on cars.

**Principal source**: [Pacific Island Ecosystems at Risk \(PIER\)](#)



**Compiler:** IUCN/SSC Invasive Species Specialist Group (ISSG)

**Review:** Colin G. Wilson\ Wildlife Management Officer\ Department of Infrastructure, Planning and Environment\ Parks & Wildlife Service\ Australia.

**Publication date:** 2006-03-23

## ALIEN RANGE

[3] AUSTRALIA	[1] CHINA
[1] FIJI	[1] FRENCH GUIANA
[1] FRENCH POLYNESIA	[1] GUAM
[1] GUYANA	[1] INDONESIA
[1] KIRIBATI	[1] MARSHALL ISLANDS
[1] MAYOTTE	[3] MICRONESIA, FEDERATED STATES OF
[1] NORTHERN MARIANA ISLANDS	[1] OUTER CAROLINE ISLANDS
[1] PALAU	[1] PHILIPPINES
[1] SOLOMON ISLANDS	[1] THAILAND
[6] UNITED STATES	[1] VANUATU

## BIBLIOGRAPHY

15 references found for *Cenchrus polystachios*

### Management information

[Effects of herbicides on seed germination and control of \*P. polystachion\*. Malaysian Rubber Board 2002.](#)

**Summary:** The abstract of a paper investigating herbicides for use in controlling *P. polystachion*.

Available from: [http://www.lgm.gov.my/journals/Abstracts/1999/aj299\\_5.html](http://www.lgm.gov.my/journals/Abstracts/1999/aj299_5.html) [Accessed 30 January 2003]

[National Pest Plant Accord, 2001. Biosecurity New Zealand.](#)

**Summary:** The National Pest Plant Accord is a cooperative agreement between regional councils and government departments with biosecurity responsibilities. Under the accord, regional councils will undertake surveillance to prevent the commercial sale and/or distribution of an agreed list of pest plants.

Available from: <http://www.biosecurity.govt.nz/pests-diseases/plants/accord.htm> [Accessed 11 August 2005]

[Northern Territory Fire and Rescue service. Mission and Gamba Grass. Northern Territory Police, Fire and Emergency Services, copyright 1999.](#)

**Summary:** Information on the threat that *P. polystachion* and another species of invasive grass have on the fire regime in the Northern Territory. Contains some management information.

Available from: [http://www.nt.gov.au/pfes/fire/Mission\\_Gamba\\_Grass.html](http://www.nt.gov.au/pfes/fire/Mission_Gamba_Grass.html) [Accessed 30 January 2003]

[PIER \(Pacific Island Ecosystems at Risk\), 2003. \*Pennisetum polystachion\*](#)

**Summary:** Ecology, synonyms, common names, distributions (Pacific as well as global), management and impact information.

Available from: [http://www.hear.org/pier/species/pennisetum\\_polystachion.htm](http://www.hear.org/pier/species/pennisetum_polystachion.htm) [Accessed 30 January 2003]

### General information

[Agricultural Clearance Manual: List of Federal Noxious Weeds and Parasitic Plants. United States Department of Agriculture.](#)

**Summary:** Some foreign plants that cause large losses in agricultural production. Also included are prohibited parasitic plants.

Available from: [http://www.aphis.usda.gov/ppq/manuals/pdf\\_files/CB%20in%20PDF/appendixF.pdf](http://www.aphis.usda.gov/ppq/manuals/pdf_files/CB%20in%20PDF/appendixF.pdf) [Accessed 30 January 2003].

[Atlas of Florida Vascular Plants, 2003. Institute for Systematic Botany.](#)

**Summary:** synonyms and some distribution.

Available from: <http://www.plantatlas.usf.edu/main.asp?plantID=162> [Accessed 30 January 2003].

Barthelat, F., pers. comm., 2007. Fabien Barthelat, Office National des Forêts, ONF Jardin d'essais 97139 Abymes, Guadeloupe.

[Biological Diversity of the Guianas. Web Listing of Plants of the Guianas: Poaceae - Zygophyllaceae. National Museum of Natural history.](#)

**Summary:** Web Listing of Plants of the Guianas.

Available from: <http://www.mnh.si.edu/biodiversity/bdg/planthtml/Poa-Z.html> [Accessed 30 January 2003].

[Botany department. \*Pennisetum polystachion\*. College of Micronesia-FSM: Federated States of Micronesia.](#)

**Summary:** Good pictures, little information.

Available from: <http://www.comfsm.fm/~dleeling/botany/1998/vhp/naimpenn.html> [Accessed on 30 January 2003].



# GLOBAL INVASIVE SPECIES DATABASE

FULL ACCOUNT FOR: *Cenchrus polystachios*

[CONABIO. 2008. Sistema de información sobre especies invasoras en México. Especies invasoras - Plantas. Comisión Nacional para el Conocimiento y Uso de la Biodiversidad. Fecha de acceso.](#)

**Summary:** English:

The species list sheet for the Mexican information system on invasive species currently provides information related to Scientific names, family, group and common names, as well as habitat, status of invasion in Mexico, pathways of introduction and links to other specialised websites. Some of the higher risk species already have a direct link to the alert page. It is important to notice that these lists are constantly being updated, please refer to the main page (<http://www.conabio.gob.mx/invasoras/index.php/Portada>), under the section Novedades for information on updates.

Invasive species - Plants is available from: [http://www.conabio.gob.mx/invasoras/index.php/Especies\\_invasoras\\_-\\_Plantas](http://www.conabio.gob.mx/invasoras/index.php/Especies_invasoras_-_Plantas) [Accessed 30 July 2008]

**Spanish:**

La lista de especies del Sistema de información sobre especies invasoras de México cuenta actualmente con información acerca de nombre científico, familia, grupo y nombre común, así como como hábitat, estado de la invasión en México, rutas de introducción y ligas a otros sitios especializados. Algunas de las especies de mayor riesgo ya tienen una liga directa a la página de alertas. Es importante resaltar que estas listas se encuentran en constante proceso de actualización, por favor consulte la portada (<http://www.conabio.gob.mx/invasoras/index.php/Portada>), en la sección novedades, para conocer los cambios.

Especies invasoras - Plantas is available from: [http://www.conabio.gob.mx/invasoras/index.php/Especies\\_invasoras\\_-\\_Plantas](http://www.conabio.gob.mx/invasoras/index.php/Especies_invasoras_-_Plantas) [Accessed 30 July 2008]

[Department of Business, Industry and Resource Development \(Australia\), April 1998. Agnote 453 No. F38, Mission Grass. Northern Territory Government of Australia. Found at: <http://www.nt.gov.au/dbird/dpif/pubcat/agnotes/weeds/453.pdf> \[Accessed 30 January 2003\]](#)

**Summary:** Minimal information. Mentions a little about the distribution in Australia's Northern Territory.

[Gramineae \*Pennisetum polystachion\* f. \*viviparum\* F.R.Fosberg & M.-H.Sachet in \*Micronesica\*, 18\(2\): 86 \(1982 publ. 1984\) 1984.](#)

**Summary:** Minimal distribution information.

Available from: [http://www.ipni.org/ipni/lpniServlet?query\\_type=by\\_id&id=918566-1](http://www.ipni.org/ipni/lpniServlet?query_type=by_id&id=918566-1) [Accessed 30 January 2003]

Holm, L. G., Plucknett, D. L., Pancho, J. V., Herberger, J. P. 1977. *The World's Worst Weeds: distribution and biology*. University Press of Hawaii, Honolulu. 609 pp.

**Summary:** Very good plant description, as well as excellent coverage of biology and agricultural importance. Has useful line drawings too.

[Invaders Database System. DIVISION OF BIOLOGICAL SCIENCES: UNIVERSITY OF MONTANA.](#)

**Summary:** Holds locations in the US and Canada where *P. polystachion* is listed as a weed.

Available from:

[http://invader.dbs.umt.edu/scripts/esrimap.dll?name=Noxious\\_map&Plant\\_Name=Pennisetum+polystachion&submit1=Submit&Choice=1&CMD=Map](http://invader.dbs.umt.edu/scripts/esrimap.dll?name=Noxious_map&Plant_Name=Pennisetum+polystachion&submit1=Submit&Choice=1&CMD=Map) [Accessed 30 January 2003]

Judziwicz, E., 1990. *Flora of the Guianas*.