Asparagus densiflorus 简体中文 正體中文

System: Terrestrial

Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Liliopsida	Liliales	Liliaceae

Common name Sprenger's asparagus fern (English), asparagus fern (English), regal fern (English), sprengeri fern (English), smilax (English), asperge de Sprenger (French), bushy asparagus (English)

Synonym *Asparagus sprengeri* , Regel
Asparagopsis densiflorus , Kunth
Protasparagus densiflorus , (Kunth) Oberm.
Asparagus aethiopicus , L. cv. *sprengeri*

Similar species *Asparagus spp.*

Summary Asparagus densiflorus, commonly known as asparagus fern, is not a true fern. It reproduces by seed. A. densiflorus is known to invade a variety of habitats, and its impacts include smothering of forest understory and ground cover and preventing the regeneration of canopy species.

view this species on IUCN Red List

Species Description
Asparagus densiflorus is described as a spreading perennial herb with a fine texture and stiff, upright habit. The stems which are stiff and erect and a bit woody are armed with stiff spines, they emerge directly from the ground. The plant grows rapidly up to a height of 60cms. The leaves of the plant are small and scale like, what we consider to be leaves are actually narrow, light green, leaf-like branchlets called cladophylls which can reach lengths of 2.5cms. The needles are clustered at branch nodes. The flowers are small, white or pinkish white, and fragrant; the fruit which are quite showy are bright red in colour about 8mm in diameter, and are typically 3 seeds per fruit (The University of Florida, 2002; Gilman, 1999).

Notes
Eating *Asparagus densiflorus* berries may cause gastrointestinal problems. Skin irritation with redness, swelling, and blisters following contact with sap.
He *et al.* (2001) observed that *A. densiflorus* is resistant to the fungi *Fusarium oxysporum*, *F. asparagi* and *F. proliferatum*. The authors believe this resistance is centered around the production two defense enzymes that *A. densiflorus* can produce.

Lifecycle Stages
Seeds may germinate at any time of the year providing moisture is available, but there is a major flush in spring and a smaller one in autumn. Growth rate is slow until the root system is well established, increasing rapidly subsequently. Tuber begin to form on the rhizomes and roots about mid-summer. Although plants do not always flower in their first year, flowering usually commences in October and continues until February or march and in some situations, continues to May or June. Fruit may be present on plants all the year. In established plants, new growth forms on the rhizomes and tubers in spring increasing the size of the effected area.(Parsons and Cuthbertson 1992).

Habitat Description
Asparagus densiflorus can be found on, \"Dry to moist forests and openings. In Australia it has invaded coastal, littoral rainforest, rainforest, frontal dunes and sclerophyll forest and coastal heath (PIER, 2005). The Australian Weeds Committee (2004) states that, \"*A. densiflorus* is a persistent weed of urban bushland. It is shade tolerant and grows best in shaded areas where other vegetation has been removed. It is also often found growing near abandoned houses or near habitation where pieces have been dumped.\" Jamieson (2002) states that, \"*A. densiflorus* grows in most soils and is fairly drought tolerant, but does much better in soil which is rich in organic matter and is watered regularly.\"
The University of Florida (2002) has gathered the following information on *A. densiflorus*: \"Cold hardy to -1°C (30°F) (Broschat and Meerow 1991). Thrives in any well-drained soil (Stresau 1986). Grows in low to high light conditions, has low nutrient requirements, and tolerates drought (Broschat and Meerow 1991). *A. densiflorus* is also noted as having \"good\" salt tolerance (Hunt 1977).”

Reproduction
Plants in the genus *Asparagus* such as *A. setaceus* and *A. densiflorus* are called ferns, but are not true ferns since they produce seeds and not spores.\" Csurhes and Edwards (1998) state that, \"The plant produces large numbers of fleshy, red berries which usually each contain a single seed. The fruit is probably dispersed by birds.

Nutrition
Asparagus densiflorus plants have extensive root systems with fairly large tubers, which are used in nature to provide food during long periods of drought in summer (Jamieson, 2002).

General Impacts
Asparagus densiflorus has the potential to be similar to climbing asparagus in its ability to smother forest understory to a height of 2.5 - 5 m; this species can also smother ground cover and prevent regeneration of canopy species (Bay of Plenty Regional Council, undated).

Management Info
Preventative measures: A Risk assessment of *Asparagus densiflorus* for the Pacific region was prepared by Pacific Island Ecosystems at Risk (PIER) using the Australian risk assessment system (Pheloung, 1995). The result is a score of 15 and a recommendation of: reject the plant for import (Australia) or species likely to be of high risk (Pacific).
A Risk assessment of *Asparagus densiflorus* 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 3 and a recommendation of: the plant requires further evaluation.
The Asparagus Weeds Best Practice Management Manual offer some best practice management advice on the management and control of Asparagus weeds. The first section of this manual contains practical information on how to develop a weed management plan and is aimed at land managers who may be embarking on a new project or tackling a weed incursion for the first time. The sections that follow consist of identification and management information for individual Asparagus weed species including *Asparagus asparagoides*, *A. declinatus*, *A. scandens*, *A. aethiopicus* (=*A. densiflorus*) and *A. africanus*.

Pathway
The widespread use of this plant in ornamental settings coupled with production of large numbers of fruit that are undoubtedly attractive to birds which will continue to contribute to the plants spread (Bishop Museum, 1999).

Principal source: University of Florida, 2002. Liliaceae/Lily Family *Asparagus densiflorus* (Kunth) Jessop. Florida Exotic Pest Plant Council.
Regional Weeds Advisory Committee, 2004. Draft Regional Weed Management Plan 1.1 Plan Title: Coastal weeds

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ALIEN RANGE

[1] ANGUILLA
[1] BAHAMAS
[1] CHRISTMAS ISLAND
[3] FRENCH POLYNESIA
[1] GUAM
[3] MARSHALL ISLANDS
[1] NEW CALEDONIA
[2] NORTHERN MARIANA ISLANDS
[1] REUNION
[1] SAINT MARTIN (FRENCH PART)
[4] TONGA
[5] AUSTRALIA
[1] BERMUDA
[2] COOK ISLANDS
[1] GUADELOUPE
[2] INDIA
[1] MARTINIQUE
[3] NEW ZEALAND
[3] PALAU
[1] SAINT BARTHELEMY
[2] SAMOA
[17] UNITED STATES

BIBLIOGRAPHY

32 references found for **Asparagus densiflorus**

Managment information
Bay of Plenty Regional Council. UNDATED. *Asparagus densiflorus*. Weed Control information for the Bay of Plenty.
Breaden, R. C.; T. R. Armstrong and D. Hinchliffe, 2006. The chemical control of the environmental weed basket asparagus (*Asparagus aethiopicus* L. cv *spregeri*) in Queensland. Plant Protection Quarterly Vol 21(3) 2006.
Summary: Available from: http://www.weeds.org.au/WoNS/bridalcreeper/docs/Asp19Breaden.pdf [Accessed 9 December 2009]
CRC for Australian Weed Management 2004. Introductory weed management manual. Australian Government. Department of Environment and Heritage.
Summary: This manual has been prepared as a training aid for the use of private landholders, conservation groups, catchment management groups, local, state and territory governments and industry. It is an introductory guide for those with little experience with weed management, particularly environmental weeds. It will be of use to those who wish to develop their weed management knowledge and skills, and as an extension resource for those who need to develop the weed management capacity of others. The manual is presented in four modules:
• Module 1: Developing and implementing a weed management plan
• Module 2: Weed control methods for community groups
• Module 3: Collecting and preparing plant specimens for identification
• Module 4: Presentation of information sessions to small groups

Available from: http://pandora.nla.gov.au/pan/109603/20091103-1603/www.lgsa.org.au/resources/documents/manual.pdf [Accessed 9 December 2009]
Csurhes and Edwards, 1998. *Asparagus densiflorus*. Potential Environmental Weeds in Australia: Queensland Department of Natural Resources.
Summary: Available from: http://www.deh.gov.au/biodiversity/invasive/publications/weeds-potential/appendix-c-a.html [Accessed 21 February, 2005]
European and Mediterranean Plant Protection Organization (EPPO), 2006. Guidelines for the management of invasive alien plants or potentially invasive alien plants which are intended for import or have been intentionally imported. EPPO Bulletin 36 (3), 417-418.
Gilman, E. F. 1999. *Asparagus densiflorus* Myers1. University of Florida Cooperative Extension Service Fact Sheet FPS-52.
He, C., T. Hsiang, and D. J. Wolyn. 2001. Activation of defense responses to Fusarium infection in *Asparagus densiflorus*. European Journal of Plant Pathology. 2001; 107(5): 473-483.

IUCN/SSC Invasive Species Specialist Group (ISSG)., 2010. A Compilation of Information Sources for Conservation Managers.
Summary: This compilation of information sources can be sorted on keywords for example: Baits & Lures, Non Target Species, Eradication, Monitoring, Risk Assessment, Weeds, Herbicides etc. This compilation is at present in Excel format, this will be web-enabled as a searchable database shortly. This version of the database has been developed by the IUCN SSC ISSG as part of an Overseas Territories Environmental Programme funded project XOT603 in partnership with the Cayman Islands Government - Department of Environment. The compilation is a work under progress, the ISSG will manage, maintain and enhance the database with current and newly published information, reports, journal articles etc.
Regional Weeds Advisory Committee, 2004. Draft Regional Weed Management Plan: Coastal Weeds. NSW North Coast Weeds Advisory Committee.
Varnham, K. 2006. Non-native species in UK Overseas Territories: a review. JNCC Report 372. Peterborough: United Kingdom.
Summary: This database compiles information on alien species from British Overseas Territories.
Available from: http://www.jncc.gov.uk/page-3660 [Accessed 10 November 2009]
Witt, A. B. R., and P. B. Edwards. 2001. Aspects of the Biology, Distribution, and Host Range of *Crioceris* sp. (Col.: Chrysomelidae: Criocerinae), a Potential Biological Control Agent for *Asparagus asparagoides* in Australia. Biological Control 23, 56-63 (2002).

General information
Australian Weeds Committee. 2004. Sprenger s Asparagus. National Weeds Strategy.
Bahamas Environment Science & Technology Commission. UNDATED. The Bahamas Invasive Plant Species.
Batianoff, G. N., and A. J. Franks. 1997. Invasion of sandy beachfronts by ornamental plant species in Queensland. Plant Protection Quarterly. 1997; 12(4): 180-186.
Beaches and Dunes of Australia. UNDATED. Beaches and Dune Systems.
Bishop Museum. 1999. Records of the Hawaii Biological Survey for 1998-Part 2: Notes 53. Bishop Museum Occasional Papers 59.
Bishop Museum. 2000. Records of the Hawaii Biological Survey for 1999-Part 2: Notes 7. Bishop Museum Occasional Paper 64.
Centre des ressources biologiques. Plantes tropicales. INRA-CIRAD. 2007.
Summary: Available from: http://collections.antilles.inra.fr/ [Accessed 31 March 2008]
Conover, C. A. 2003. Ferns. University of Florida IFAS Extension.
Summary: Available from: http://edis.ifas.ufl.edu/MG032 [Accessed 21 February, 2005]
Conservatoire Botanique National De Mascarin (BOULLET V. coord.) 2007. - *Asparagus densiflorus* Index de la flore vasculaire de la R&#65533;union (Trach&#65533;ophytes) : statuts, menaces et protections. - Version 2007.1
Summary: Base de donn&#65533;es sur la flore de La R&#65533;union. De nombreuses informations tr&#65533;s utiles.
Available from: http://flore.cbnm.org/index2.php?page=taxon&num=9f396fe44e7c05c16873b05ec425cbad [Accessed 28 March 2008]
Florence J., Chevillotte H., Ollier C. & Meyer J.-Y. 2007. *Asparagus densiflorus* Base de donn&#65533;es botaniques Nadeaud de l Herbier de la Polyn&#65533;sie fran&#65533;aise (PAP).
Summary: Base de donn&#65533;es sur le flore de Polyn&#65533;sie Fran&#65533;aise.
Available from: http://www.herbier-tahiti.pf/Selection_Taxonomie.php?id_tax=4747 [Accessed 26 March 2008]
Fournet, J. 2002. Flore illustr&#65533;e des phan&#65533;rogames de guadeloupe et de Martinique. CIRAD-Gondwana editions.
ITIS (Integrated Taxonomic Information System). 2005. Online Database *Asparagus densiflorus*.
Summary: An online database that provides taxonomic information, common names, synonyms and geographical jurisdiction of a species. In addition links are provided to retrieve biological records and collection information from the Global Biodiversity Information Facility (GBIF) Data Portal and bioscience articles from BioOne journals.
Available from: http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=193452 [Accessed March 2005]
Jamieson, H. G. 2002. *Asparagus densiflorus*. Kirstenbosch National Botanical Garden.
Summary: Available from: http://www.plantzafrica.com/plantab/asparagdens.htm [Accessed 21 February, 2005]
MacKee, H.S. 1994. Catalogue des plantes introduites et cultiv&#65533;es en Nouvelle-Cal&#65533;donie, 2nd edn. MNHN, Paris.
Summary: Cet ouvrage liste 1412 taxons (esp&#65533;ces, sous esp&#65533;ces et vari&#65533;t&#65533;s) introduits en Nouvelle-Cal&#65533;donie. L auteur pr&#65533;cise dans la majorit&#65533; des cas si l esp&#65533;ce est cultiv&#65533;e ou naturalis&#65533;e.
Paterson, W.T. Cuthbertson, E.G., 1992. Noxious Weeds of Australia. Inkata Press. Melbourne
PIER (Pacific Island Ecosystems at Risk). 2005. *Asparagus densiflorus* (Kunth) Jessop, Liliaceae.
Summary: Available from: http://www.hear.org/pier/species/asparagus_densiflorus.htm [Accessed 21 February, 2005]
Russell, A. B. UNDATED. *Asparagus densiflorus* (Sprengeri group). Poisonous Plants of North Carolina.
Summary: Available from: http://www.ces.ncsu.edu/depts/hort/consumer/poison/Asparde.htm [Accessed 21 February, 2005]
Singh, D. B., S. A. Nair, and T. V. R. S. Sharma. 1999. *Asparagus densiflorus* Sprengeri Robustus - An addition to the ornamental flora of Andamans. Journal of the Bombay Natural History Society. 1999; 96 (2): 356-359.
University of Florida, 2002. Liliaceae/Lily Family *Asparagus densiflorus* (Kunth) Jessop. Florida Exotic Pest Plant Council.
USDA-GRIN (Germplasm Resources Information Network). 2005. *Asparagus densiflorus*. National Genetic Resources Program [Online Database] National Germplasm Resources Laboratory, Beltsville, Maryland.
Summary: Available from: http://www.ars-grin.gov/cgi-bin/npgs/html/tax_search.pl?Asparagus+densiflorus [Accessed 21 February, 2005]
USDA-NRCS (Natural Resource Conservation Service). 2005. *Asparagus densiflorus*. The PLANTS Database Version 3.5 [Online Database] National Plant Data Center, Baton Rouge, LA.
Summary: Available from: http://plants.usda.gov/java/nameSearch?mode=Scientific+Name&keywordquery=Asparagus+densiflorus&go.x=10&go.y=11 [Accessed 21 February, 2006]