Cyathea cooperi

System: Terrestrial

<table>
<thead>
<tr>
<th>Kingdom</th>
<th>Phylum</th>
<th>Class</th>
<th>Order</th>
<th>Family</th>
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<tbody>
<tr>
<td>Plantae</td>
<td>Pteridophyta</td>
<td>Filicopsida</td>
<td>Polypodiales</td>
<td>Cyatheaceae</td>
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</tbody>
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Common name

Iacy tree fern (English), Australian tree fern (English), Cooper’s cyathea (English), straw tree fern (English), fanjan Australien (French), scaly tree fern (English), fougère arborescente d’Australia (French)

Synonym

*Sphaeropteris cooperi*, (Hook. ex F. Muell.) R. M. Tryon
*Alsophila australis*, R.Br.var. *excelsa* F.M.Bailey
*Alsophila cooperi*, Hook. ex F.Muell.
*Alsophila australis*, R.Br.var. *pallida* F.M.Bailey
*Cyathea australis*, (R.Br.) Domin var. *pallida* (F.M.Bailey) Domin
*Cyathea australis*, (R.Br.)Domin var. *cervicalis* (F.M.Bailey) Domin
*Cyathea brownii*, Domin var. *cooperi* (Hook. ex F.Muell.)Domin
*Alsophila excelsa*, R.Br. ex Endl.var. *cooperi* (Hook. ex F.Muell.)
Domin
*Alsophila australis*, R.Br.var. *cervicalis* F.M.Bailey

Similar species

*Cyathea australis*

Summary

Native to Queensland, Australia, Cyathea cooperi has invaded several islands in the Pacific. It is a fast growing fern that displaces native vegetation easily by forming dense stands. C. cooperi has become a problem in Hawaii by displacing its native ferns. It spreads its spores very easily by wind and proceeds to grow within a few weeks. It can grow up to 12m high and its fronds can grow up to 5m long.

*view this species on IUCN Red List*
Species Description

*Cyathea cooperi* can grow up to 12m in height (Wilson, 2007). The stipe base of *Cyathea cooperi* has two different types of scales. The first being dark, small scales and the other being large, pale, papery scales. The latter is the reason for the shaggy blond mat of scales that forms. After the leaves die, the stipes will fall off at the trunk leaving oval scars (Medeiros *et al.*, 1992). The sorus lacks an indisium and has a ring of small scales around the sporangia (Heenan *et al.*, 1998). The fronds of *C. cooperi* can grow up to 5m long (Wilson, 2007). HEAR (2006) states, “Blades 2-pinnate-pinnatifid to 3-pinnate at base, green or light green above, paler below; rachises with dark brown, obtuse tubercles. Pinnae up to 65 x 26cm. Pinnules stalked, tips acuminate. Ultimate segments deeply pinnatifid to 1-pinnate, segment lobes falcate, margins irregularly toothed or rarely deeply lobed. Veins 1-forked.” In older *Cyathea cooperi* a tight rosette will form at the top of the trunk (Large, 2005).

Lifecycle Stages

According to Deppler (1998), “Spore are microscopic dust-like particles which are released from the sporangia (spore sacs) when they are ripe. The spores are dispersed by wind and, if they should settle in a shady, constantly moist and warm position, they may germinate. Germination usually takes about three months but in some species it may take many months. Initially at germination a tiny flat, green heart-shaped structure is formed and it is at this stage that fertilisation occurs. Some weeks later, the first tiny fronds will begin to develop and a new plant will begin to grow.”

Uses

*Cyathea cooperi* is commonly used as an ornamental plant (Star *et al.*, 2005).

Habitat Description

The native habitat for *Cyathea cooperi* is in gullies and rainforests. It can also be found along roadsides and streamcourses above permanent waterline. *C. cooperi* is somewhat tolerant of dry conditions but is found most in wet sites. These wet sites are usually where there is ground disturbance (Medeiros *et al.*, 1992). This species likes loam, clay loam, and sand soils (Coleman, 1997).

Reproduction

The spores of *Cyathea cooperi* are dispersed by the wind (Hear, 2006). *Cyathea cooperi* produces 22-27 fertile fronds per year (Durand and Goldstein, 2001b).

General Impacts

In Hawaii the threat to forests is the displacement of native species where the fern achieves high densities (Medeiros *et al.*, 1992). Medeiros *et al.* (1992) reports that *Cyathea cooperi* has displaced two native species of *Cyathea*, *Cyathea excelsa* and *Cyathea bourbonica*, in native rainforests and headlands.
Management Info
Preventative measures: A Risk assessment of Cyathea cooperi 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 8 and a recommendation of: reject the plant for import (Australia) or species likely to be of high risk (Pacific).
Physical: Bushcare (2006) states, that sawing the trunk at ground level, or leaving a thigh high stump that won't become a trip hazard.

Pathway
Cyathea cooperi was first introduced outside of its native range as a horticultural plant by the 1950s it had escaped cultivation (Durand and Goldstein, 2001a).


Compiler: National Biological Information Infrastructure (NBII) & IUCN/SSC Invasive Species Specialist Group (ISSG)

Review:

Publication date: 2007-08-03

ALIEN RANGE
[2] AUSTRALIA
[1] FRENCH POLYNESIA
[1] MAURITIUS
[1] NEW CALEDONIA
[2] NEW ZEALAND
[1] REUNION
[4] UNITED STATES

BIBLIOGRAPHY
19 references found for Cyathea cooperi

Management information
Summary: This article attempts to compare growth rates of two different ferns in Hawaii.

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Summary: This website gives detailed information on distribution and ecology of Cyathea cooperi.

This is a report on the invasive species of environmental concern in Tonga.

**Summary:** This is report on the invasive species of environmental concern in Tonga.


**Summary:** This was a study done to find all roadside invasive species on the island of Molokai, Hawaii.


**General information**


**Summary:** L objectif de ce papier est d’identifier les zones prioritaires en matière de gestion des invasions biologiques ? La R’union en modélisant la distribution actuelle et potentielle d’une sélection de plantes parmi les plus envahissantes.


**Summary:** This website gives a brief description of *Cyathea cooperi*.

**Available from:** [http://florabase.calm.wa.gov.au/browse/flora?f=011a&level=s&id=51&PHPSESSID=a8a5e8da6065749bc02da873e17e8e7](http://florabase.calm.wa.gov.au/browse/flora?f=011a&level=s&id=51&PHPSESSID=a8a5e8da6065749bc02da873e17e8e7) [Accessed April 6, 2007]

**Summary:** Base de donnèes sur la flore de la Réunion (Trachophytes) : statuts, menaces et protections. - Version 2007.1

**Depler, L., 1998. Introducing Australian Ferns, Australian Plants Online.**

**Summary:** This website gives the structure, life cycle, habitat, and gives information on native ferns of Australia.


**Summary:** This article lists 36 new records of casual adventive plants in New Zealand.


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**Summary:** This website gives detailed information on *Cyathea australis* and *Cyathea cooperi*. Australian National Botanical Gardens.


**Summary:** This website gives detailed information on *Cyathea australis* and *Cyathea cooperi*.


**Summary:** This website gives all synonyms for plant species as well as maps.


**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 from BioOne journals.


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