

*Nephrolepis cordifolia* [简体中文](#) [正體中文](#)

**System:** Terrestrial

Kingdom	Phylum	Class	Order	Family
Plantae	Pteridophyta	Filicopsida	Polypodiales	Dryopteridaceae

**Common name** herring bone fern (English), tube ladder fern (English), erect sword fern (English), southern sword fern (English), tuber sword fern (English), fish-bone fern (English), lemon butter fern (English), ladder fern (English), narrow swordfern (English), sword fern (English), boston fern (English)

**Synonym** *Aspidium cordifolium* , (L.) Sw. undated  
*Aspidium pendulum* , (Raddi, undated)  
*Aspidium tuberosum* , Bory ex Willd. Undated  
*Aspidium volubile* , (Sm.) F.M.Bailey, undated  
*Nephrodium pendulum* , (Raddi) Desv., undated  
*Nephrodium tuberosum* , (Bory ex Willd.) Desv, undated  
*Nephrolepis pendula* , (Raddi) J.Sm., undated  
*Nephrolepis radicans* , (Burm.f.) Kuhn, undated  
*Nephrolepis tuberosa* , (Bory ex Willd.) C.Presl, undated  
*Polypodium cordifolium* , L.

**Similar species** *Nephrolepis exaltata*

**Summary** *Nephrolepis cordifolia*, commonly known as tuberous sword fern, is a wood fern that typically grows in woodland areas. Dispersal occurs via spores that can be dispersed through wind and water, and through the movement of stolons, tubers and rhizomes. *N. cordifolia* can form dense stands through its aggressive spread and displace native vegetation.



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

## Species Description

The terrestrial tuberous sword fern is an epiphytic and epilithic plant. Rhizomes are suberect and the fronds upto a meter long. Distinguishing features include the production of tubers. Please follow this link for a [description of the species](#) and this link that provides [description and key to distinguish alien and native Nephrolepis in the USA](#)

## Uses

*Nephrolepis cordifolia* is commonly used as an ornamental plant.

## Habitat Description

The tuberous sword fern is a wood fern that typically grows in woodland areas. In its native Australia it occurs in rainforest or open forest in eastern Queensland and north eastern New South Wales. It is found naturalized in pine rocklands, flatwoods, marsh edges, and hammocks of conservation areas of south Florida and as far north as Georgia in the United States. In New Zealand it is found growing in native forest, scrub and shrublands, coastal sites, urban open spaces and islands. on banks, rocky outcrops, open forest, roadsides, and epiphyte perches.

## Reproduction

Tuberous sword fern produced numerous spores that are dispersed through wind and water. It also spreads through its rhizomes/stolons and tubers.

## General Impacts

Tuberous sword fern is a threat to native species. Its aggressive growing habit results in the formation of dense stands that can exclude native species.

## Management Info

**Preventative measures:** Tuberous sword fern is listed in the [National Plant Pest Accord of New Zealand](#). To be included on the Accord list the pest plant must be declared an 'unwanted organism' under the Biosecurity Act 1993. It is classified as a Surveillance Pest Plant in the [Auckland Regional Pest Strategy 2007-2012](#). Surveillance Pest Plants include species that have been identified as having significant impacts on the biosecurity values of the Auckland region. The Regional Council seeks to prevent their establishment or spread by prohibiting their sale, propagation, distribution and exhibition.

Tuberous sword fern is used as an ornamental plant and can escape from cultivation into natural areas.

Measures have to be taken to limit this spread.

**Mechanical:** Hand pulling can be used to remove some of the fern plants, however care should be taken that no plant parts are left in the soil that can regrow and that the plants are disposed of properly. It is recommended to mulch the foliage.

**Chemical:** Plants can be killed with herbicides containing glyphosate. A foliar application of a 1.5% solution provides good control. Follow-up applications are necessary to control plants regrowing from rhizomes and tubers. (University of Florida IFAS Extension, undated). [Auckland Council](#) recommends a weed wipe using 2g metsulfuron/1L and spray using Spray 1g metsulfuron/10L.

## Principal source:

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

## Review:

**Publication date:** 2011-11-23

## ALIEN RANGE

[1] COOK ISLANDS

[1] NEW ZEALAND

[1] UNITED STATES

## BIBLIOGRAPHY

20 references found for *Nephrolepis cordifolia*

### Management information

[Biosecurity New Zealand. 2011. National Plant Pest Accord](#)

**Summary:** Available from: <http://www.biosecurity.govt.nz/nppa> [Accessed 23 November 2011]

[Eurobodalla Shire Council \(ESC\). Undated. Fishbone Fern \(\*Nephrolepis cordifolia\*\).](#)

**Summary:** This website gives information about the plant's distribution, control, description, and dispersal.

Available from: <http://www.esc.nsw.gov.au/weeds/Sheets/herbs/H%20Fishbone%20fern.htm> [Accessed February 20, 2007]

[Global Compendium of Weeds \(GCW\), 2007. \*Nephrolepis cordifolia\* \(Nephrolepidaceae\)](#)

**Summary:** Available from: [http://www.hear.org/gcw/species/nephrolepis\\_cordifolia/](http://www.hear.org/gcw/species/nephrolepis_cordifolia/) [Accessed 23 November 2011]

[Langeland, K. 2001. A Case of Mistaken Identity, Native and Exotic Boston Ferns and Sword Ferns \(\*Nephrolepis\* spp. \*Wildland Weeds\*. 13-17.](#)

**Summary:** This article discusses the differences of two species of *Nephrolepis*.

Available from: <http://www.se-eppc.org/pubs/www/fernsFall2001.pdf> [Accessed February 20, 2007]

[University of Florida- IFAS Extension, undated. Sword Fern \*Nephrolepis cordifolia\* \(L.\) Dryopteridaceae Invasive Species Management Plans for Florida](#)

**Summary:** Available from: [http://plants.ifas.ufl.edu/misc/inv\\_plant\\_man\\_plan\\_pdf/sword\\_fern.pdf](http://plants.ifas.ufl.edu/misc/inv_plant_man_plan_pdf/sword_fern.pdf) [Accessed 23 November 2011]

Global Invasive Species Database (GISD) 2024. Species profile *Nephrolepis cordifolia*. Available from: <https://www.iucngisd.org/gisd/species.php?sc=1158> [Accessed 30 April 2024]

[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]

## General information

[Cook Islands Biodiversity Database, 2007. \*Nephrolepis cordifolia\* Tuber Sword-fern](#)

**Summary:** Available from: <http://cookislands.bishopmuseum.org/species.asp?id=6432> [Accessed 23 November 2011]

Esler, A.E. 1988. The naturalisation of plants in urban Auckland, New Zealand Success of the alien species\*. *New Zealand Journal of Botany*. 26: 565-584.

[Florida Exotic Pest Plant Council \(FLEPPC\). 2006. \*Nephrolepis cordifolia\* \(L.\) Presl.](#)

**Summary:** This gives information regarding distribution, ecological, significance, and the plant's description.

Available from: [http://www.fleppc.org/ID\\_book/Nephrolepis\\_cordifolia.pdf](http://www.fleppc.org/ID_book/Nephrolepis_cordifolia.pdf) [Accessed February 20, 2007]

Harshberger, J.W. 1908. The Water-Storing of Tuber Plants. *Bulletin of the Torrey Botanical Society*.

**Summary:** This compares the biology of different tuber plants and how they are different and similar.

Herrero-Borgonon, Juan J., Herrero-Borgonon, Juan J., 2004. New data about the non-native Iberian pteridophyte flora. *Acta Botanica Malacitana*. 29 (4). 263-265.

[Institute for Systematic Biology. 2006. \*Nephrolepis cordifolia\*.](#)

**Summary:** This website gives detailed information on *Nephrolepis cordifolia* with a map, synonyms, and images.

Available from: <http://www.plantatlas.usf.edu/main.asp?plantID=1824> [Accessed February 20, 2007]

[Invasive Species. 2006. Florida EPPC's 2003 List of Invasive Species.](#)

**Summary:** This website shows a list of Florida's invasive species.

Available from: <http://www.invasive.org/listview.cfm?list=19> [Accessed February 20, 2007]

[ITIS \(Integrated Taxonomic Information System\). 2006. Online Database \*Nephrolepis cordifolia\*.](#)

**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=17604](http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=17604) [Accessed February 20, 2007]

[Murdock A.G., & Smith A.R., 2003. Pteridophytes of Moorea, French Polynesia, with a New Species, \*Tmesipteris gracilis\* \(Psilotaceae\)1. \*Pacific Science\*. 57\(3\): 253-265.](#)

**Summary:** This article gives information about Pteridophytes on the island of Moorea. It also gives collection of other flora on the island.

Available from: [http://muse.jhu.edu/journals/pacific\\_science/v057/57.3murdock.pdf](http://muse.jhu.edu/journals/pacific_science/v057/57.3murdock.pdf) [Accessed February 20, 2007]

Schaefer, H., 2001. Distribution and status of the pteridophytes of Faial Island, Azores (Portugal) *Fern Gazette*. 16(5). 2001. 213-237

Sullivan, J.J., S.M Timmins, P.A. Williams. 2005. Movement of exotic plants into coastal native forests from gardens in northern New Zealand. *New Zealand Journal of Ecology*. 29(1): 1-10.

US Army Corps of Engineers Jacksonville District (USACE). Undated. *Nephrolepis cordifolia* - narrow swordfern.

[USDA, ARS. 2011. Taxon: \*Nephrolepis cordifolia\* \(L.\) C. Presl National Genetic Resources Program. Germplasm Resources Information Network - \(GRIN\) \[Online Database\]. National Germplasm Resources Laboratory, Beltsville, Maryland.](#)

**Summary:** Available from: <http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?403335> [Accessed 23 November 2011]

[USDA-NRCS. 2011. \*Nephrolepis cordifolia\* \(L.\) C. Presl narrow swordfern. The PLANTS Database. National Plant Data Team, Greensboro, NC 27401-4901 USA.](#)

**Summary:** Available from: <http://plants.usda.gov/java/profile?symbol=NECO3> [Accessed 23 November 2011]