

Phormium tenax [简体中文](#) [正體中文](#)

System: Terrestrial

Kingdom	Phylum	Class	Order	Family
Plantae	Magnoliophyta	Liliopsida	Liliales	Agavaceae

Common name lino de Nueva Zelanda (English), bush flax (English), lirio de espada (English), New Zealand flax (English), New Zealand hemp (English)

Synonym

Similar species

Summary New Zealand flax *Phormium tenax* is considered a major threat to the recovery of critically endangered plant species in Saint Helena through competition with natives. Flax also reduces suitable habitat for native bird species by altering native plant communities.



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

Species Description

Phormium tenax is a perennial rhizomatous herb (to circa 2 m tall) native to New Zealand. The stems are short and stout. The leaves are strap-like, deep green, clump forming and fibrous. The flowers are red and orange, occurring in terminal sprays (Csurhes and Edwards 1998 in PIER 2006). Plants to 5 to 6 m tall. Leaves bright orange toward base, stiff, erect, at least in lower part, 100 to 300 cm long, 5 to 12 cm wide, margins entire, apex usually splitting. Inflorescences 4 to 5 m long, peduncles dark brown, 2 to 3 cm in diameter, glabrous; tepals dull red, 2.5 to 5 cm long. Capsules dark brown with age, erect, 3-angled, 5 to 10 cm long, usually falcate, abruptly constricted at apex, not twisted. Seeds elliptic, 9 to 10 mm long, somewhat twisted (Wagner *et al.* 1999, in PIER 2006).

Uses

Flax is used in Pacific cultures for weaving baskets and other objects.

Habitat Description

Phormium tenax competes for habitat with *Elaphoglossum dimorphum* in St Helena where it is found on stone steps, rocks and shaded mossy banks in tree fern thickets (IUCN 2008). It is reported to be found growing primarily near footpaths and in undisturbed vegetation on Inaccessible and Nightingale Islands (Dean *et al.* 1994). Surveys of the New Zealand flax communities on Inaccessible Island from 1999 to 2000 revealed a population of 1000 plants occurring mainly on the steep coastal cliff faces (Ryan & Glass 2001, in Ryan *et al.* 2007b). Flax was common on the island in well-drained areas of relatively open vegetation (dominated by the ferns *Blechnum penna-marina* and *Rumohra adiantiformis*) and was scarce in dense tussock grass communities (Ryan *et al.* 2004). Flax appeared to struggle to gain a foothold in this habitat on Inaccessible Island; it was often found at disturbed sites such as at the base of overturned *Phylica arborea* trees on the summit scarp or growing on boulders or rocky outcrops (Ryan *et al.* 2004). The apparent difficulty with which flax established in dense tussock probably helped limit the spread of the species on Inaccessible. (Note, however, that flax on Nightingale Island is confined to an area of *Spartina* tussock grass and *Phylica woodland* (Ryan *et al.* 2007b)). In Hawaii the species forms dense thickets in gullies in mesic areas below 300 meters above sea level (Smith, Alien Plants of Hawaii web site, in PIER 2006).

General Impacts

Phormium tenax New Zealand flax colonises and converts native habitats degrading them and making them unsuitable for native species. It has the potential to alter the structure and function of vegetation communities of islands where it is introduced (Ryan & Glass 2001).

The following Saint Helena's plant species are negatively affected by the spread of flax: the 'Critically Endangered (CR)' *Elaphoglossum dimorphum* in IUCN Red List of Threatened Species (Eastwood 2004); the 'Endangered (EN)' small bellflower (see *Wahlenbergia angustifolia* in IUCN Red List of Threatened Species); the 'Critically Endangered (CR)' large bellflower (see *Wahlenbergia linifolia* in IUCN Red List of Threatened Species) (Cairns-Wicks 2003a; 2003b); the 'Endangered (EN)' dogwood (see *Nesohedyotis arborea* in IUCN Red List of Threatened Species) (Cairns-Wicks 2003c); the 'Critically Endangered (CR)' He cabbage tree (see *Pladaroxylon leucadendron* in IUCN Red List of Threatened Species) (Cairns-Wicks 2003d); the 'Vulnerable (VU)' black cabbage tree (see *Melanodendron integrifolium* in IUCN Red List of Threatened Species) (Cairns-Wicks 2003e); the 'Critically Endangered (CR)' false gumwood (see *Commidendrum spurium* in IUCN Red List of Threatened Species) (Cairns-Wicks 2003f) and the 'Critically Endangered (CR)' She cabbage tree (see *Lachanodes arborea* in IUCN Red List of Threatened Species) (Cairns-Wicks 2003g). The 'Vulnerable 'VU' Tristan bunting (see *Nesospiza acunhae* in IUCN Red List of Threatened Species) and the 'Vulnerable 'VU' grosbeak bunting (see *Nesospiza wilkinsi* in IUCN Red List of Threatened Species) are also negatively impacted by flax (BirdLife International 2008a,b).

Management Info

Funding from the UK Foreign and Commonwealth Office allowed for an initial clearing and eradication programme on Inaccessible Island in September 2004. A team of four was deployed by helicopter to cut down as many large plants as possible (Ryan *et al.* 2007b). The follow-up for this project was planned for three to five years later and took place in October 2007 under the *Managing Aliens on Outer Islands* project. There was more re-growth of *Phormium tenax* than anticipated but only a few plants had flowered since the initial clearing in 2004. Follow-up operations are recommended.

Principal source:

Compiler: IUCN SSC Invasive Species Specialist Group (ISSG) with support from the EU-funded South Atlantic Invasive Species project, coordinated by the Royal Society for the Protection of Birds (RSPB)

Review:

Publication date: 2010-08-16

ALIEN RANGE

[2] AUSTRALIA
[1] NEW ZEALAND
[4] SAINT HELENA
[2] UNITED KINGDOM

[1] IRELAND
[1] PORTUGAL
[1] SPAIN
[4] UNITED STATES

Red List assessed species 11: CR = 5; EN = 4; VU = 2;

[Commidendrum spurium](#) CR
[Lachanodes arborea](#) CR
[Nesohedyotis arborea](#) EN
[Nesospiza wilkinsi](#) EN
[Thalassarche chlororhynchos](#) EN
[Wahlenbergia linifolia](#) CR

[Elaphoglossum dimorphum](#) CR
[Melanodendron integrifolium](#) VU
[Nesospiza acunhae](#) VU
[Pladaroxylon leucadendron](#) CR
[Wahlenbergia angustifolia](#) EN

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[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.

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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.

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