Pteris cretica **System:** Terrestrial

Kingdom	Phylum	Class	Order	Family
Plantae	Pteridophyta	Filicopsida	Polypodiales	Pteridaceae

Common name ribbon fern (English, Ireland), owali (Hawaiian, Hawaii), Cretan brake (English), Cretan fern (English), white-lined Cretan brake (English), oali (Hawaiian, Hawaii), kretischer saumfarn (German), white ribbon fern (English, Canterbury Region)

Synonym

Similar species

Summary *Pteris cretica* commonly known as Cretan brake is a variegated green fern that has been widely distributed as an ornamental species. The native range of *P. cretica* is unclear; it has an almost pantropical distribution. The potential environmental and economical impacts of this species are not well known. It is documented to be problematic along with a range of other exotic species in the ecologically fragile Florida limestone grotto communities where space and resources are limited. *P. cretica* is capable of becoming widespread in areas where it has been introduced such as the British Isles where a progressive radial expansion has been occurring since 1930.

view this species on IUCN Red List

Species Description
Nauman (1993) gives the following botanical description for *Pteris cretica* in the Flora of North America: Stems slender, creeping, sparingly scaly; scales dark brown to chestnut brown. Leaves clustered to closely spaced, to 1m. Petiole straw-coloured to light brown distally, darker proximally, 10-50cm, base sparsely scaly. Blade irregularly ovate, primarily and irregularly pedately divided, 10-30 × 6-25cm; rachis not winged; only terminal pinna decurrent on rachis. Pinnae 1-3 pairs, well separated, blade often 5-parted with terminal pinna and 2 lateral pairs of pinnae remaining green through winter, not articulate; sterile pinnae to 25 × 0.8-1.5cm, serrulate; fertile pinnae narrower than sterile pinnae, to ca. 11mm wide, spiny-serrate; base acute acroscopically and decurrent (sometimes narrowly and barely so) basiscopically, glabrous; proximal pinnae with 1 (rarely 2) basiscopic lobes. Veins free, simple or forked. Sori narrow, blade tissue exposed abaxially.
Webb *et al.* (1988) give the following botanical description in the Flora of New Zealand Series: Rhizomes short-creeping, scaly. Stipes 25-75 cm long, ± devoid of scales except at very base. Laminae ovate or broadly ovate, 20-40 × 10-30 cm, 1-pinnate or with lower pinnae forked. Primary pinnae in 2-7 pairs, widely spaced, linear, tapering to acute apices, entire or minutely crenate at apices, 12-27 × 0.8-1.8 cm; upper pinnae adnate; lower pinnae stalked. Sori occupying whole of both margins of pinnae except at apices, protected by reflexed margins. *P. cretica* can be distinguished from native New Zealand ferns by its pinnate fronds with the lower pinnae often forked (Webb *et al.*, 1988).

Valier (1995) writes that fronds of the Cretan brake can grow up to 2 feet (60 cm) tall with spores produced on separate fertile fronds; sterile fronds are noted to be wider. See Starr & Starr (2008) for images of this species from Hawai'i.

Notes
Pteris cretica commonly hybridises with *P. irregularis* in Hawai'i to form *P. x hillebrandii* (Valier, 1995). *P. cretica* var. *albolineata* Hooker, 1860 has also been described and possesses pinnae with a white or pale green longitudinal stripe along the middle (Nauman, 1993).

Uses
Pteris cretica is commonly grown as an ornamental species in pot plants and gardens (Stace, 2010).
Pteris ferns such as *P. vittata* and *P. cretica* have shown a remarkable ability to tolerate and accumulate high concentrations of arsenic as well as antimony (in Robinson, 2009) in their fronds. They have been used to remove arsenic from residential soils in Washington DC (Blaylock & Elless, 2007). This phytofiltration ability makes it capable of rapidly filtering arsenic from drinking water supplies (Elless *et al.*, 2007).

Habitat Description
In Hawai'i, *Pteris cretica* can be found in dry or wet forests up to an elevation of 3000 feet (915 m) (Valier, 1995).

Reproduction
Pteris cretica reproduces through spores and can be apogamous, skipping the sexual stage of gametophytes (Robinson, 2009).

General Impacts
Little is known about the potential impacts of *Pteris cretica*. On the British Isles it is considered a threat more so for its progressive radial expansion in range that has been apparent since 1930 rather than any potential ecological and economic impacts (Robinson, 2009). In the ecologically fragile limestone grottoes of Florida, *P. cretica* and a range of other invasive exotic species can be problematic to rare native species if facilitated by shady, humid conditions (Florida Natural Areas Inventory, 2010).

Management Info
Preventative measures: There is little information available on the management of *Pteris cretica*. In Europe there are virtually no restrictions on the trade of alien fern species such as *P. cretica*, despite the well documented escape of some species into the wild (Robinson, 2009).
While not legally declared a pest plant in New Zealand and no restrictions on its growth and propagation, *P. cretica* has been listed as a \"Research Organism\" under the latest Auckland Regional Pest Management Strategy (Auckland Regional Council, 2007) requiring further research into its potential threat and dispersal pathways.

Pathway
Pteris cretica is grown as an ornamental in gardens (Stace, 2010).

Principal source:

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ALIEN RANGE

[1] AUSTRALIA **[1]** BRITISH ISLES

[1] IRELAND
[1] PERU
[4] NEW ZEALAND
[5] UNITED STATES

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Managment information

General information

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