

Polystichum vestitum

COMMON NAME

punui, prickly shield fern

SYNONYMS

Polystichum aculeatum var. *perelegans* (Colenso) Domin; *Polystichum venustum* Hombr.; *Aspidium aculeatum* var. *vestitum* (G.Forst.) Hook. ex Hook.f.; *Polystichum aculeatum* var. *vestitum* (G.Forst.) Domin; *Aspidium waikarense* Colenso; *Polypodium vestitum* G.Forst.; *Polystichum perelegans* (Colenso) C.Chr.; *Aspidium pulcherrimum* Colenso; *Aspidium venustum* (Hombr.) Hook.f.; *Aspidium vestitum* (G.Forst.) Sw.; *Aspidium aculeatum* sensu F.Muell.; *Aspidium perelegans* Colenso; *Aspidium proliferum* sensu A.Rich.

FAMILY

Dryopteridaceae

AUTHORITY

Polystichum vestitum (G. Forst.) C. Presl

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

Yes

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Ferns

NVS CODE

POLVES

CHROMOSOME NUMBER

2n = 164

CURRENT CONSERVATION STATUS

2017 | Not Threatened

PREVIOUS CONSERVATION STATUSES

2012 | Not Threatened

2009 | Not Threatened

2004 | Not Threatened

DISTRIBUTION

Endemic. New Zealand: North Island (scarce north of Auckland and the Coromandel Peninsula), South Island, Stewart Island/Rakiura, Chatham Islands, Snares Islands/Tini Heke, Antipodes Islands, Auckland Islands, Campbell Island/Motu Ihupuku, Macquarie Island.



Polystichum vestitum. Photographer: Department of Conservation, Licence: Public domain.



Stokes Valley. Photographer: Jeremy R. Rolfe, Date taken: 01/08/2006, Licence: CC BY.

HABITAT

Coastal to alpine. In the northern part of its range *P. vestitum* is confined to montane regions or cold ('temperature inversion') situations, further south it progressively extends to lower elevations; in the South Island it ranges from coastal to alpine regions. *Polystichum vestitum* is a species of exposed habitats, such as forest margins, gully floors and tussock grasslands, but it also commonly extends into forest in colder, wetter parts of New Zealand.

WETLAND PLANT INDICATOR STATUS RATING

FACU: Facultative Upland

Occasionally is a hydrophyte but usually occurs in uplands (non-wetlands).

DETAILED DESCRIPTION

Rhizome erect, sometimes forming a trunk up to 0.9 m tall. **Stipe** 90–410 mm long. **Stipe and rachis** densely clothed with scales of diverse form. **Larger rachis scales** usually ovate-lanceolate (those from the mid rachis 340–1620 µm at their mid length) to lanceolate-acicular (Chatham Islands and these from the mid rachis 180–780 µm at their mid length); usually bicolorous, with an obvious dark brown centre surrounded on all sides by pale brown margins, but dark centre sometimes much reduced (Chatham Islands, Subantarctic Islands and islands around Stewart Island/Rakiura especially) such that the rachis scales are uniformly pale brown; apex usually long and tapering; usually without marginal projections except for plants from the Chatham Islands, in which they may be very well developed; usually underlain by pale bristle-like scales. **Lamina** 0.23–2.0 m, long, 90–350–(480) mm; narrowly elliptic to narrowly oblong; bipinnate; adaxially usually dark green (sometimes purple-green), abaxially paler.

Primary pinnae in 20–62 pairs, oblong. **Secondary pinnae** all stalked except those towards the apex of primary pinnae; with sharply pointed apex and prominent marginal teeth and/or crenulations. **Sori** round. **Indusia** peltate, ± flat, ± round; with entire although sometimes undulate and/or scalloped margins; central dark area usually insignificant (< 10% surface area, and usually < 5%).

SIMILAR TAXA

Perrie et al. (2003) note that *Polystichum vestitum* can generally be distinguished from the other native New Zealand species of *Polystichum* by: the presence of indusia, which are more or less flat and have a rather small dark centre; secondary pinnae which are all stalked except for those near the apices of the primary pinnae; relatively long and narrow fronds, with parallel sides; scales on the stipe and rachis which are large, ovate-lanceolate, with a prominent dark brown centre completely surrounded by a pale brown margin, and with few, if any, marginal projections. They further note that some plants from the Chatham Islands have wider fronds (relatively longer primary pinnae in particular), and scales that are more acicular-lanceolate, uniformly pale brown, and with many prominent marginal projections. Nevertheless, with their generally larger size, larger numbers of stalked secondary pinnae, indusia with relatively small dark centres, and smaller spores, these plants are unlikely to be confused with *P. neozelandicum*, the only other superficially similar member of the genus on the Chatham Islands (see de Lange et al. 2011). Similarly, some plants of *P. vestitum* from islands around Stewart Island/Rakiura and the Subantarctic (particularly, the Snares and Auckland Islands) have uniformly pale brown scales and wider frond (relatively longer primary pinnae in particular). These can be readily distinguished from the only other *Polystichum* of those islands, *P. neozelandicum* subsp. *zerophyllum* and *P. cystostegia*, by their more or less flat indusia with rather small dark centres, larger number of stalked secondary pinnae, scales with few, if any, marginal projections, and smaller spores (Perrie et al. 2003).

PROPAGATION TECHNIQUE

Easily grown from fresh spores and transplants. However, often slow to establish. Does best in a shaded site planted within a deep, free draining humus-enriched fertile soil.

ETYMOLOGY

polystichum: Many rows (of sori); from the Greek polus and stikhos; parallel rows of spore cases

vestitum: Clothed (with chaffy scales); from the Latin vestire; dense cover of scales on its leaf stalks

ATTRIBUTION

Fact sheet prepared for NZPCN by P.J. de Lange (13 November 2012). Description adapted from Perrie et al. (2003).

REFERENCES AND FURTHER READING

de Lange PJ, Heenan PB, Rolfe JR. 2011. Checklist of vascular plants recorded from Chatham Islands. Department of Conservation, Wellington, NZ. 57 p.

<https://www.doc.govt.nz/globalassets/documents/conservation/native-plants/chatham-islands-vascular-plants-checklist.pdf>

Perrie LR, Brownsey PJ, Lockhart PJ, Large MF. 2003B. Morphological and genetic diversity in the New Zealand fern *Polystichum vestitum* (Dryopteridaceae), with special reference to the Chatham Islands. *New Zealand Journal of Botany* 41(4): 581–602. <https://doi.org/10.1080/0028825X.2003.9512872>.

NZPCN FACT SHEET CITATION

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MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/polystichum-vestitum/>