Parablechnum novae-zelandiae

COMMON NAME
kiokio, horokio, palm leaf fern

SYNONYMS
Stegania procera var. stipulosa A.Rich.; Blechnum capense sensu Cheeseman; Lomaria capensis sensu Cheeseman; Lomaria procera var. flagelliformis Szyszyl.; Blechnum novae-zelandiae T.C.Chambers et P.A.Farrant

FAMILY
Blechnaceae

AUTHORITY
Parablechnum novae-zelandiae (T.C.Chambers et P.A.Farrant) Gasper et Salino

FLORA CATEGORY
Vascular – Native

ENDEMIC TAXON
Yes

ENDEMIC GENUS
No

ENDEMIC FAMILY
No

STRUCTURAL CLASS
Ferns

NVS CODE
BLENOV

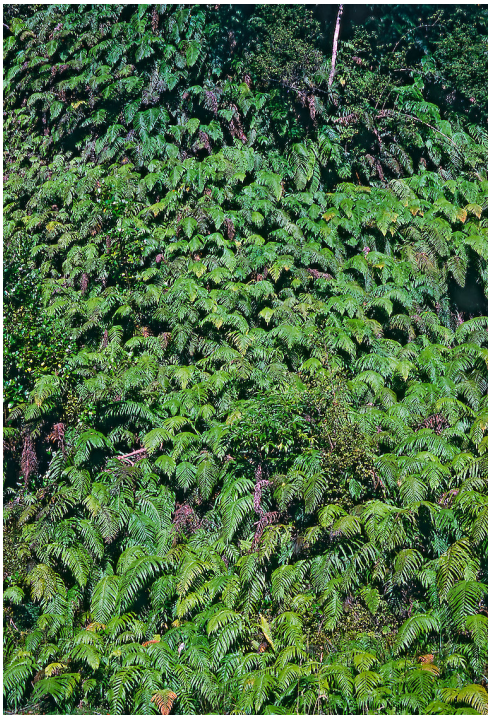
CHROMOSOME NUMBER
2n = 56

CURRENT CONSERVATION STATUS
2017 | Not Threatened

PREVIOUS CONSERVATION STATUSES
2012 | Not Threatened
2009 | Not Threatened
2004 | Not Threatened

DISTRIBUTION
Endemic. New Zealand: Kermadec Islands (Raoul Island), North Island, South Island, Stewart Island/Rakiura, Chatham Islands.

HABITAT
Coastal to montane. One of the most widespread, abundant and easily recognisable ferns in New Zealand. Widely known by the Maori name “kiokio” *Blechnum novae-zelandiae* is most conspicuous in areas of high rainfall along roadsides, cliff faces, ravines and river banks. It also commonly establishes in pine (*Pinus* spp.,) plantations and is a common urban “weedy” fern in some parts of the country.



Franz Josef. Photographer: Jeremy R. Rolfe, Date taken: 04/03/1986, Licence: CC BY.

Stipe scales. Stokes Valley. Photographer:

WETLAND PLANT INDICATOR STATUS RATING

FAC: Facultative
Commonly occurs as either a hydrophyte or non-hydrophyte (non-wetlands).

DETAILED DESCRIPTION

Rhizome short-creeping, very robust in larger specimens, occasionally suberect or erect; scales to 16 × 3 mm, linear or lanceolate, acuminate, light reddish brown, sometimes dark at base, more or less entire. Fronds dimorphic, erect or pendulous, 0.09–0.3 m (in dry exposed places and in swamps) –3.5 m long (on stream banks) × 35–500 mm wide, widest mid frond; sterile and fertile fronds usually similar length. **Stipes** 0.08–0.75 m (stipes of fertile fronds often shorter than stipes of sterile fronds), stout, to c. 10 mm diameter, pale brown or pinkish brown, darkening at base, scaly, especially at the base; scales 2–20 × 1–3 mm wide, but mostly small and appressed, ovate, reddish brown, concolorous or "black-spot", entire or branched at their bases. **Lamina** ovate or lanceolate, bright mid green at maturity, 1-pinnate, 5–50 pairs of pinnae. **Rachis** and costae pale pinkish brown, with sparse to moderately dense scales and irregular fine short tangled hairs; scales 3.0–15.0 × 1.0–1.5 mm, variable in shape from linear to ovate or sometimes stellate, pale brown, reddish brown, "black spot" (especially conspicuous for costal scales), or sometimes entirely concolorous (juveniles and plants growing in swamps, and most plants on the Kermadec islands), entire or toothed. **Sterile pinnae** 20–350 × 6–30 mm, oblong-lanceolate to lanceolate, apices acute, acuminate, or attenuate, or, in juveniles and smaller plants growing in swamps, obtuse; cuneate, truncate, or rounded-cordate at rachis; sub-petiolate at base of lamina, adnate and decurrent at apex; mostly coriaceous but almost membranous in juveniles and plants growing in swamps; margins minutely toothed, more so near apices; veins simple or once-furcate; small-branched or stellate scales often extending on to lower surface of pinnae; basal pinnae rounder and nearly always significantly shorter than middle pinnae, with 2–11 pairs of sterile auricles (small plants from swamps, very harsh conditions, and from low light conditions may lack auricles); terminal pinna longer than subterminal pinnae. **Fertile pinnae** 20.0–250 × 1.5–6.0 mm, narrow, linear, sessile at base of lamina, becoming basiscopically adnate at apex; basal pinnae often with sterile auriculate segments at their bases, the lowermost sometimes completely sterile and auriculate; sori covering under surface except for auriculate zone and the short sterile apical region; indusium brown, laciniate. **Spores** 40–60 × 32–43 µm.

SIMILAR TAXA

Parablechnum novae-zelandiae is recognised by the basal pinnae which are always significantly shorter than the middle pinnae; by the presence of well developed auricles at the base of sterile and fertile fronds; by the rachis and/or abaxial costae usually bearing numerous peltate scales furnished with a clearly defined "black-spot"; and by the straight, acute, acuminate or attenuate, coriaceous and closely spaced pinnae (spacings usually < 10 mm between adjacent pinnae).

FLOWERING

Not applicable—spore producing

FLOWER COLOURS

No flowers

FRUITING

Not applicable—spore producing

PROPAGATION TECHNIQUE

Easily grown from fresh spores and whole plants, transplants well and flourishes in most conditions. Needs room to spread, often self establishes and can sometimes become aggressive in a small garden.

ETYMOLOGY

novae-zelandiae: Of New Zealand

TAXONOMIC NOTES

Plants referred to this species on Raoul Island (Kermadec Islands) may require further study, these plants are uniformly green (without the strong pink colouration typical of this species in New Zealand proper), and the stipe and rachis scales often lack a black spot. However, taken as a whole these plants still fit within the current circumscription of *Parablechnum novae-zelandiae*.

Perrie et al. (2014) advocated for a broadened circumscription of Blechnaceae whereby a number of genera traditionally recognised as distinct from *Blechnum* were merged within it. However, this view has not met with universal acceptance (see Gasper et al. 2016) and does not seem to be followed worldwide (PPG 2016). From a New Zealand perspective the decision to merge *Doodia* in *Blechnum*, and rejection of *Diploblechnum* has not been universally accepted either e.g., Wilcox & Warden (2017), and as such it is considered appropriate to follow world opinion and accept the taxonomy of Gasper et al. (2016) and recommendations of the PPG (2016). See also the comments by Pyner (2017).

ATTRIBUTION

Fact sheet prepared for NZPCN by P.J. de Lange (7 March 2012). Description adapted Chambers & Farrant (1998).

REFERENCES AND FURTHER READING

Chambers TC, Farrant PA. 1998. The *Blechnum procerum* ("*capense*") (Blechnaceae) complex in New Zealand. *New Zealand Journal of Botany 36(1)*: 1–19. https://doi.org/10.1080/0028825X.1998.9512544.

Gasper AL, de Oliveira Dittrich VA, Smith AR, Salino A. 2016. A classification for Blechnaceae (Polypodiales: Polypodiopsida): New genera, resurrected names, and combinations. *Phytotaxa 275*: 191–227. https://doi.org/10.11646/phytotaxa.275.3.1.

Perrie LR, Wilson RK, Shepherd LD, Ohlsen DJ, Batty EL, Brownsey PJ, Bayly MJ. 2014. Molecular phylogenetics and generic taxonomy of Blechnaceae ferns. *Taxon 63(4)*: 745–758. https://doi.org/10.12705/634.13.

PPG 1: The Pteridophyte Phylogeny Group 2016. A community-derived classification for extant lycophytes and ferns. *Journal of Systematics and Evolution 54*: 563–603. https://doi.org/10.1111/jse.12229.

Pyner T. 2017. A new classification of *Blechnum*. British Pteridological Society. https://ebps.org.uk/new-classification-blechnum/. Accessed [INSERT DATE ACCESSED].

Wilcox M, Warden J. 2017. Botany of Hillsborough coast bush reserves, Manukau Harbour, Auckland. *Auckland Botanical Society Journal 72*: 32–46.

NZPCN FACT SHEET CITATION

Please cite as: de Lange, P.J. (Year at time of access): Parablechnum novae-zelandiae Fact Sheet (content continuously updated). New Zealand Plant Conservation Network. https://www.nzpcn.org.nz/flora/species/parablechnum-novae-zelandiae/ (Date website was queried)

MORE INFORMATION

https://www.nzpcn.org.nz/flora/species/parablechnum-novae-zelandiae/