

Parablechnum novae-zelandiae

COMMON NAMES

kiokio, horokio, palm leaf fern

BIOSTATUS

Native

CATEGORY

Vascular

STRUCTURAL CLASS

Ferns

FLOWER COLOURS

No flowers

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) \times 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 $2\text{--}20 \times 1\text{--}3$ 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 $3.0\text{--}15.0 \times 1.0\text{--}1.5$ 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** $20\text{--}350 \times 6\text{--}30$ 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** $20.0\text{--}250 \times 1.5\text{--}6.0$ 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, lacinate. **Spores** $40\text{--}60 \times 32\text{--}43$ μm .



Parablechnum novae-zelandiae. Photographer: Bec Stanley, Licence: CC BY-SA.



Parablechnum novae-zelandiae. Photographer: Wayne Bennett, Licence: CC BY-NC.

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).

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.

CURRENT CONSERVATION STATUS

2023 | Not Threatened

DETAILED TAXONOMY

FAMILY

Blechnaceae

AUTHORITY

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

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

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).

ENDEMIC TAXON

Yes

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

ECOLOGY

FLOWERING

Not applicable—spore producing

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.

WETLAND PLANT INDICATOR STATUS RATING

FAC: Facultative

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

OTHER INFORMATION

ETYMOLOGY

novae-zelandiae: Of New Zealand

NVS CODE

BLENOV

CHROMOSOME NUMBER

2n = 56

PREVIOUS CONSERVATION STATUSES

2017 | Not Threatened

2012 | Not Threatened

2009 | Not Threatened

2004 | Not Threatened

REFERENCING AND CITATIONS

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>.

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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>.

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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.

ATTRIBUTION

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

NZPCN FACT SHEET CITATION

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<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/>

PDF DATE

31 October 2024