



Zealandia pustulata subsp. *pustulata*

Common Name(s):

hounds tongue, kowaowao, paraharaha

Current Threat Status (2012):

Not Threatened

Distribution:

Indigenous. New Zealand: Kermadec Islands (Raoul, Meyers only), Three Kings, North, South, Stewart, Chatham, Auckland and Antipodes Islands. Also Australia. Abundant throughout main islands of New Zealand except for Central Otago.

Habitat:

A common fern of coastal to montane area, growing either on the ground, over rocks or on tree trunks and branches. Although widespread and often found growing admixed with *Dendroconche scandens*, *Zealandia pustulata* is more drought tolerant and seems to prefer more open, drier habitats.

Features*:

Epiphytic or rupestral scrambling or climbing fern. Rhizomes long-creeping, 4-10(-12) mm diameter, fleshy-succulent, yellow-green to golden brown, sometimes glaucescent maturing greyish-brown to grey-black, growing tips densely invested in brown-black appressed ± ovate scales, these entire or minutely toothed near apex, scales shedding over time as rhizome matures leaving small scars. Fronds joined to rhizomes, very coriaceous; stipes 20-250(-340) mm long, pale brown to almost black, ± pliant when young becoming brittle with age; laminae adaxially glabrous (except for a few scales on midrib and costae), bright glossy green (yellow green in exposed sites), abaxially paler, in outline variable ranging from undivided (especially in young plants) narrowly elliptic, 70-250 × 10-30 mm to mostly pinnate, ovate, 60-450 × 40-300 mm; midrib and veins prominent, main lateral veins mostly prominent, usually with 2 or 3 series of major areoles between costa (midrib in simply fronds); hydathodes present on blind vein endings, visible mainly on upper surface; pinnae in 1-12 pairs, 30-170 × 5-40 mm, bluntly acute, margins smooth, weakly undulose to extremely so, bases adnate. Sori prominent, round (rarely elliptic), sunk into abaxial lamina causing a prominent bulge on the adaxial laminal surface, aligned in one row either side of costa, set back from pinna margins. Spores pale, bearing wart-like protuberances.

Flowering:

Not applicable - spore producing

Fruiting:

Not applicable - spore producing

Threats:

Not Threatened

*Attribution:

Fact sheet prepared for NZPCN by P.J. de Lange (13 January 2012). Description adapted from Brownsey & Smith-Dodsworth (2000) and Bostock & Spokes (1998).

References and further reading:

Bostock, P.D.; Spokes, T.M. 1998: Polypodiaceae. Pp. 468-495. Flora of Australia 48. Australian Biological Resources Study, CSIRO Canberra

Brownsey, P.J.; Smith-Dodsworth, J.C. 2000: New Zealand Ferns and Allied Plants. Auckland, David Bateman

Testo, W.L.; Field, A.R.; Sessa, E.B.; Sundue, M. 2019: Phylogenetic and morphological analyses support the resurrection of *Dendroconche* and the recognition of two new genera in Polypodiaceae Subfamily Microsoroideae. *Systematic Botany* 44(4): 1-16. DOI 10.1600/036364419X15650157948607

For more information, visit:

http://nzpcn.org.nz/flora_details.asp?ID=2201



Caption: *Microsorium pustulatum* subsp. *pustulatum* (Kowaowao)

Photographer: Wayne Bennett



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