Hypolepis millefolium

COMMON NAME
thousand leaved fern

FAMILY
Dennstaedtiaceae

AUTHORITY
Hypolepis millefolium Hook.

FLORA CATEGORY
Vascular – Native

ENDEMIC TAXON
Yes

ENDEMIC GENUS
No

ENDEMIC FAMILY
No

STRUCTURAL CLASS
Ferns

NVS CODE
HYPMIL

CHROMOSOME NUMBER
2n = 104

CURRENT CONSERVATION STATUS
2012 | Not Threatened

PREVIOUS CONSERVATION STATUSES
2009 | Not Threatened
2004 | Not Threatened

Sabine river, January. Photographer: John Smith-Dodsworth

Sabine river, January. Photographer: John Smith-Dodsworth

DISTRIBUTION
Endemic. New Zealand: North, South, Stewart, Chatham, Antipodes, Auckland and Campbell Islands. In the North Island it is known from Mt Pirongia and East Cape south, though mostly from the Central Volcanic Plateau, Mt Egmont and main axial ranges. One unusual, North Island lowland record from a roadside near Kihikihi may have came from plants that temporarily established there from road machinery that had been used to work the Western Taupo Road (where this fern is common).

HABITAT
Coastal to alpine, In northern part of range virtually confined to montane - alpine areas but descending to sea level on the subantarctic islands. Hypolepis millefolium is a common fern of grassland and rock strewn slopes. It also extends into scrub and forest. On the Chatham Islands it grew in restiad peat bogs, while on the subantarctic islands it grows amongst tussock grassland and open Dracophyllum scrub.

FEATURES

Rhizome subterranean, long-creeping, 1.5–3.0 mm diameter, glabrous or bearing scattered pale brown hairs (especially near growing point), stipes arising at intervals of 15–130 mm. Stipes 50–350 mm long, 1.5–3.0 mm diameter, red-brown below, pale brown above, a few pale or reddish brown hairs along stipe. Laminae rhombic, ovate or broadly ovate, 150–400(–700) × 80–250 mm, membranous to slightly coriaceous, normally tripinnate (bipinnate in smallest specimens) at apex to quadripinnate or sometimes almost 5-pinnate at base. Rachis pale brown to yellowish green, bearing pale brown or colourless eglandular hairs c.1 mm long. Primary pinnae in 20–25 pairs, the lowest arising at 30-50° to stem, upper ones at 70-90°, opposite below, subopposite or alternate above, the longest below middle 70–260 × 35–130 mm; lowest ones 35–150 mm apart, middle ones 15–50 mm apart; upper ones narrowly ovate, lower ones ovate, midrib narrowly winged towards apices. Secondary pinnae narrowly ovate to ovate, midribs broadly winged, 25–80 × 10–35 mm, those on the lower pinnae decreasing in length along the pinnae. Tertiary pinnae 5–20 × 3–10 mm, 2-6 deep serrations per pinnule. Quaternary pinnae 0.1–0.5 × 0.1–0.4 mm, sometimes deeply divided. Hairs: glistening colourless hairs scattered along midribs of pinnae and pinnules, on both surfaces, up to 1 mm long. Veins reaching margin at tooth apex. Sori: one on each ultimate segment, though often absent from lowest two pairs of pinnae, originating away from margin, unprotected at maturity or partially covered by a green reflexed marginal flap. Spores pale brown, echinate.

SIMILAR TAXA

Hypolepis millefolium is easily recognised on account of its brittle, vivid bright green to yellow-green colour and finely divided ('lacy') fronds. From other New Zealand Hypolepis it is also distinguished by the unprotected (or scarcely so) sorus; brittle stipes and fertile fronds which are 1.5-5.0 mm diameter; absence (or near absence) of glandular hairs; by the laminae of the fertile fronds > 400 × 250 mm, with the ultimate segments < 1 mm wide; and by the complete absence of hairs from the sorus.

FLOWERING

Not Applicable - Spore Producing

FLOWER COLOURS

No flowers

FRUITING

Not Applicable - Spore Producing

LIFE CYCLE

Minute spores are wind dispersed (Thorsen et al., 2009).

PROPAGATION TECHNIQUE

Hypolepis millefolium is very attractive fern that is easily grown from fresh spores and rooted pieces. Despite its typical associated within montane to alpine habitats it can be grown easily at low altitudes. Unlike many other Hypolepis, H. millefolium is less inclined to be short-lived and, as a rule is less 'weedy'.

ETYMOLOGY

hypolepis: From the greek hypo (under) and lepis (scale), referring to the position of the sori on the ferns
millefolium: Many leaved; from the Latin mille and folium

WHERE TO BUY

Not commercially available

ATTRIBUTION

Fact sheet prepared for NZPCN by P.J. de Lange (7 November 2012). Description from Brownsey & Chinnock (1984).

REFERENCES AND FURTHER READING

Brownsey, P.J.; Chinnock, R.J. 1984: A Taxonomic revision of the New Zealand species of *Hypolepis*. *New Zealand Journal of Botany 22*: 43-80.
Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. Perspectives in Plant Ecology, Evolution and Systematics 11: 285-309

NZPCN FACT SHEET CITATION

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MORE INFORMATION

https://www.nzpcn.org.nz/flora/species/hypolepis-millefolium/