

# 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

2017 | Not Threatened

## PREVIOUS CONSERVATION STATUSES

2012 | Not Threatened

2009 | Not Threatened

2004 | Not Threatened

## DISTRIBUTION

Endemic. New Zealand: North Island (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 come from plants that temporarily established there from road machinery that had been used to work the Western Taupo Road where this fern is common), South Island, Stewart Island/Rakiura, Chatham Islands, Antipodes Islands, Auckland Islands and Campbell Island/Motu Ihupuku.

## 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.



Sabine river, January. Photographer: John Smith-Dodsworth, Licence: CC BY-NC.



Sabine river, January. Photographer: John Smith-Dodsworth, Licence: CC BY-NC.

## DETAILED DESCRIPTION

**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 pinnae 35–150 mm apart, middle pinnae 15–50 mm apart; upper pinna 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, 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 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.

## FLOWER COLOURS

No flowers

## 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 elevations. 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 PJ, Chinnock RJ. 1984. A Taxonomic revision of the New Zealand species of *Hypolepis*. *New Zealand Journal of Botany* 22: 43–80. <https://doi.org/10.1080/0028825X.1984.10425234>.

Thorsen MJ, Dickinson KJM, Seddon PJ. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 11: 285–309. <https://doi.org/10.1016/j.ppees.2009.06.001>.

## NZPCN FACT SHEET CITATION

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

## MORE INFORMATION

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