

Sticherus flabellatus var. flabellatus

COMMON NAME

umbrella fern

SYNONYMS

Gleichenia flabellata R. Br.

FAMILY

Gleicheniaceae

AUTHORITY

Sticherus flabellatus (R.Br.) H.St. John var. flabellatus

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

No

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Ferns

CHROMOSOME NUMBER

2n = 68

CURRENT CONSERVATION STATUS

2017 | Not Threatened | Qualifiers: SO

PREVIOUS CONSERVATION STATUSES

2012 | Not Threatened

2009 | Not Threatened | Qualifiers: SO

2004 | Sparse

DISTRIBUTION

Indigenous. In New Zealand known from scattered locations from North Cape south to the Karangahake Gorge. Probably most common on Great Barrier Island (Aotea Island).

There has been some confusion over the distribution of *Sticherus flabellatus* in New Zealand. Perrie (2013) stated: "Populations of *Sticherus tener* and *Sticherus urceolatus* in the northern South Island had previously been mistakenly attributed to *Sticherus flabellatus*. We now believe that *Sticherus flabellatus* does not occur in the South Island, but it is common in the northern North Island."

Common in Australia.

HABITAT

Coastal to lowland. In the North Island usually associated with kauri (*Agathis australis*) forest, and/or regenerating forest and scrub nearby established kauri forest remnants. It also grows along steep sided streams and on rocks within gorges.



Sticherus flabellatus. Photographer: John Smith-Dodsworth, Licence: CC BY-NC.



Kerikeri River. Mar 2007. Photographer: Jeremy R. Rolfe, Licence: CC BY.

DETAILED DESCRIPTION

Colonial yellow-green to green umbrella fern. **Fronds** erect 1–1.4 m tall, rather glossy above, dull below. **Stipes** 0.2–0.6 m long, pale brown, glabrous, rather wiry. **Rachises** in 1–(2) tiers, each forking 2–3 times, 100–300 mm from the stipe to the tip of the longest branch, erect and spreading, flabellate, glabrous or slightly scaly. **Pinnae** linear up to 40 × 3 mm, apex acute, glossy yellow-green to green above paler beneath. **Sori** in one row either side of the midrib but away for the pinna margins, 4–5 sporangia in each, without indusia. (Description adapted from Chinnock & Bell (1998)).

According to Brownsey *et al.* (2013), "*Sticherus flabellatus* has fronds that are held partially upright in the form of a fan, rather than drooping like an umbrella. There is a very narrow angle (mean 30°) between paired proximal costae. The ultimate leaflet is much longer than the proximal costa (mean ratio 15.5 : 1). The proximal costa usually lacks leafy ultimate segments. The ultimate leaflet is narrowly elliptic in outline with the segments arising at 50–60° to the costa. The segments of the ultimate leaflet are longest near the middle, 20–40 mm long, 1.5–2 mm wide, minutely serrate along the margins, and green on the underside. There are occasional, very narrow, fimbriate, brown scales along the costae, and hair-like scales on the undersurfaces. Spores measure 32–35 µm by 17–19 µm (four samples from four populations)."

SIMILAR TAXA

Rather distinctive, the broad, fan-shaped, yellow-green to green concolorous fronds serve to distinguish it from the only other common *Sticherus* in New Zealand, *S. cunninghamii* (Hook.f.) Ching, which has much more divided fronds, with shorter pinnules dark green above and whitish beneath. Its pinnae are also markedly more scaly. Distinction from the little known (in New Zealand) *S. tener* (R.Br.) Ching is less clear, but this species has its pinnae arising at right angles to the rachis branches.

PROPAGATION TECHNIQUE

Can be grown from rooted pieces and fresh spores. However, spores can be very tricky to raise and plants resent root disturbance. Nevertheless, once established this species is one of the few members of the New Zealand Gleicheniaceae that is easily maintained in cultivation.

THREATS

Not actively threatened. However, with the exception of Great Barrier Island (Aotea Island) it is never common anywhere, and some populations are very small and vulnerable to land clearance and mining.

ETYMOLOGY

sticherus: In rows; from the greek sticheres; arrangement of the spore clusters

flabellatus: Fan shaped; from the Latin flabellum; shape of the leaves

ATTRIBUTION

Fact sheet prepared for NZPCN by P.J. de Lange (January 2005). Description adapted from Chinnock & Bell (1998). Updated by Melissa Hutchison (19 November 2022), with reference to Brownsey *et al.* (2013).

REFERENCES AND FURTHER READING

Brownsey PJ, Ewans R, Rance B, Walls S, Perrie LR. 2013. A review of the fern genus *Sticherus* (Gleicheniaceae) in New Zealand with confirmation of two new species records. *New Zealand Journal of Botany* 51(2): 104–115.

<https://doi.org/10.1080/0028825X.2013.773917>

Chinnock RJ, Bell GH. 1998. Gleicheniaceae. *Flora of Australia* 48, *Ferns Gymnosperms and allied groups*: 148–162. ABRS/CSIRO Victoria, Australia.

Perrie L. 2013: Would you mine a rare population? Blog on the Museum of New Zealand/Te Papa Tongarewa website. <https://blog.tepapa.govt.nz/2013/04/21/would-you-mine-a-rare-population/>

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/sticherus-flabellatus-var-flabellatus/>