

# Ophioglossum petiolatum

## COMMON NAME

stalked adder's tongue fern

## SYNONYMS

*Ophioglossum pedunculosum* sensu Allan (1961), *O. reticulatum* L.

## FAMILY

Ophioglossaceae

## AUTHORITY

*Ophioglossum petiolatum* Hook.

## FLORA CATEGORY

Vascular – Native

## ENDEMIC TAXON

No

## ENDEMIC GENUS

No

## ENDEMIC FAMILY

No

## STRUCTURAL CLASS

Ferns

## NVS CODE

OPHPET

## CHROMOSOME NUMBER

Meiosis irregular

## CURRENT CONSERVATION STATUS

2017 | Threatened – Nationally Critical | Qualifiers: RF, SO, Sp

## PREVIOUS CONSERVATION STATUSES

2012 | Threatened – Nationally Critical | Qualifiers: RF, SO, Sp

2009 | Threatened – Nationally Critical | Qualifiers: RF, SO, Sp

2004 | Threatened – Nationally Endangered

## DISTRIBUTION

Indigenous. Manawatāwhi / Three Kings Islands (Manawatāwhi / Great Island), North Island, South Island, Chatham Islands. Not recently recorded from the South Island. Last recorded from Chatham Island (Rēkohu) in 2007. Still present on Manawatāwhi / Great Island, and locally from Te Paki to Kawhia and Arohaki Lagoon. Probably now extinct at Hokio, near Levin. New Zealand plants appear to belong to a widespread and common tropical species which reaches its southern limits in this country.

## HABITAT

Recorded from coastal and lowland habitats. A seasonally dormant species of ephemeral wetlands, moist talus and grassy areas, sandy margins of coastal lagoons, herbfields near lake margins, swamps and streams, and damp hollows within podocarp forest. Plants are most conspicuous between spring and late summer, dying down in autumn and winter.



*Ophioglossum petiolatum* plants growing at base of kahikatea tree, Te Kauri Scenic Reserve, near Kawhia, 1986. Photographer: Peter J. de Lange, Licence: CC BY-NC.



Plants growing in kahikatea forest remnant, Te Kauri Scenic Reserve, near Kawhia (1986). Photographer: John Smith-Dodsworth, Licence: CC BY-NC.

## WETLAND PLANT INDICATOR STATUS RATING

FACW: Facultative Wetland

Usually is a hydrophyte but occasionally found in uplands (non-wetlands).

## DETAILED DESCRIPTION

Perennial, seasonally dormant, firmly fleshy plants forming extensive patches in ideal conditions. **Rhizomes** erect, glabrous, loosely covered in fleshy white to pale yellow sheaths. **Roots** fleshy, proliferous. **Sterile blade** on short stalk up to 30 mm long, yellow-green to dark green. **Lamina of sterile blade** 15–150 × 6–40 mm, yellow-green to dark green, broadly to narrowly ovate, elliptic, undivided, base truncate to slightly attenuate, venation usually darker than rest of lamina, distinctly reticulate. **Fertile spike** 14–60 mm long, on stalk 40–200 mm long, bearing 15–48 pairs of sequentially ripening, long-persistent sporangia.

## SIMILAR TAXA

*Ophioglossum coriaceum* A.Cunn. which is generally smaller and has a narrower, oval-shaped and stalk-less sterile blade. The fertile spike is much shorter and carries fewer (7–15) pairs of spore-bearing capsules. However the distinction is not quite as clear cut and some populations with the sterile blade form of *O. coriaceum* but sporangia pairs of up to 25 are known. Further work on the status of plants referred to *O. petiolatum* in New Zealand is needed (see comments by de Lange & Rolfe 2010).

## FLOWERING

October—December

## FLOWER COLOURS

No flowers

## FRUITING

November—January

## PROPAGATION TECHNIQUE

Easily grown by the division of whole plants. Does best in a fertile soil kept permanently moist (but not saturated). Will tolerate full sun but does better in semi-shade. Intolerant of competition from taller faster growing plants and very vulnerable to slug and snail browsing. This species makes an interesting and unusual pot plant. So far most New Zealand plants that have been investigated in detail have proved sterile. The sterility of the plants examined brings into question the exact status of plants attributed to this species in New Zealand.

## THREATS

May be overwhelmed by other plants or pigs. Destruction of suitable habitat or taking over of habitat by adventive species more able to tolerate changing nutrient status or with greater competitive ability. In cultivation this species is devastated by exotic snails and slugs and this maybe one of the problems for the species in the wild. Plants from two populations (Opuatia and Hokio) proved to be sterile.

## ETYMOLOGY

**ophioglossum:** Snake's tongue; from the Greek ophis and glossa; appearance of the fertile leaf

## ATTRIBUTION

Fact sheet prepared by P.J. de Lange 2004 (Updated 21 March 2011). Description based on de Lange et al. (2010).

## REFERENCES AND FURTHER READING

- Brownsey PJ. 1985. *Ophioglossum petiolatum* at Hokio beach. *Wellington Botanical Society Bulletin* 42: 33–34.
- Brownsey PJ, Smith-Dodsworth JC. 2000. New Zealand Ferns and Allied Plants. David Bateman, Auckland, NZ. 168 p.
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- de Lange PJ. 1988. *Ophioglossum petiolatum* Hook in a reserve near Kawhia. *Wellington Botanical Society Bulletin* 44: 4–7.
- de Lange PJ, Heenan PB, Norton DA, Rolfe JR, Sawyer JWD. 2010. Threatened Plants of New Zealand. Canterbury University Press, Christchurch. 471 p.
- de Lange PJ, Rolfe JR. 2010. New Zealand indigenous vascular plant checklist. New Zealand Plant Conservation Network, Wellington, NZ. 131 p.

### **NZPCN FACT SHEET CITATION**

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<https://www.nzpcn.org.nz/flora/species/ophioglossum-petiolatum/> (Date website was queried)

### **MORE INFORMATION**

<https://www.nzpcn.org.nz/flora/species/ophioglossum-petiolatum/>