

Phlegmariurus varius

COMMON NAME

clubmoss

SYNONYMS

Urostachys varius (R.Br.) Herter ex Nessel; *Lycopodium varium* R.Br.; *Lycopodium billardieri* Spring; *Lycopodium novae-zelandicum* Colenso; *Lycopodium varium* var. *alpinum* R.Br.; *Lycopodium varium* var. *umbrosum* R.Br.; *Lycopodium varium* R.Br.; *Lycopodium flagellaria* sensu A.Rich.; *Lycopodium phlegmaria* sensu A.Cunn., *Lycopodium novozealandicum* Colenso; *Huperzia varia* (R. Br.) Trevis.

FAMILY

Lycopodiaceae

AUTHORITY

Phlegmariurus varius (R.Br.) A.R.Field et Bostock

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

No

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Lycophytes (clubmosses, selaginella, quillworts)

NVS CODE

HUPVAR

CHROMOSOME NUMBER

2n = c.256

CURRENT CONSERVATION STATUS

2017 | Not Threatened | Qualifiers: SO

PREVIOUS CONSERVATION STATUSES

2012 | Not Threatened

2009 | Not Threatened

2004 | Not Threatened

DISTRIBUTION

Indigenous. New Zealand: Kermadec (Raoul Island only), Manawatāwhi / Three Kings Islands, North Island, South Island, Stewart Island/Rakiura, Chatham Islands, Antipodes Islands, Auckland Islands and Campbell Island/Motu Ihupuku. Also Australia.

HABITAT

Coastal to subalpine. In forest (usually as an epiphyte), in scrub, often rupestral or in peat bogs.

WETLAND PLANT INDICATOR STATUS RATING

UPL: Obligate Upland

Rarely is a hydrophyte, almost always in uplands (non-wetlands).



Pinehaven, Upper Hutt. Photographer: Jeremy R. Rolfe, Date taken: 29/12/2004, Licence: CC BY.



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

DETAILED DESCRIPTION

Terrestrial, lithophytic or epiphytic plants producing 1-many branches from near base. **Branches** tufted, erect suberect if terrestrial or pendulous if epiphytic, branched 1-many times, 0.08–2.0 m long. **Leaves** spirally arranged, spreading, angled at 60–90° to axis, linear-lanceolate, acute to subacute, 9–18 mm long, 1–3 mm wide, deep green to yellow-green, sometimes tinged orange; texture and thickness variable; margins entire, often thickened. Transition from sterile to sporogenous zone gradual or abrupt. **Sporogenous zone** 40–180 mm long, usually 3.5–4.5 mm diameter usually distinct from sterile leaves but sometimes scarcely discernible. **Sporophylls** variable; linear-lanceolate, spreading, shorter than sterile leaves, to 10 mm long, smaller towards apex; or ovate triangular, keeled, in 4-rows, imbricate, appressed, 2.0–2.5 mm long × 1.5–2.0 mm wide. **Sporangia** occupying one-tenth to the entire length of the sporophyll. (Description adapted from Chinnock (1998) and Brownsey & Smith-Dodsworth (2000)).

SIMILAR TAXA

Epiphytic forms are easily distinguished from all other New Zealand representatives of the family. However, sterile, terrestrial forms can only be reliably distinguished from *Huperzia australiana* by the lack of bulbils and by the upper branch tips which tend to curl downwards rather than stay erect.

FLOWERING

N.A.

FLOWER COLOURS

No flowers

FRUITING

N.A.

LIFE CYCLE

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

PROPAGATION TECHNIQUE

Can be grown from rooted pieces. These should be planted in a moist, free draining medium like orchid mix. Epiphytic forms make a spectacular hanging basket plant. Plants do best in partially shade and should never be allowed to dry out. Growth is usually rather slow.

TAXONOMIC NOTES

Field & Bostock (2013) have revived the genus *Phlegmariurus*, a genus which applies to one of the New Zealand plants previously referred to *Huperzia*, *H. varia*—which is now known as *Phlegmariurus varius*. As currently circumscribed the New Zealand concept of *Phlegmariurus varius* includes a range of distinctive races some of which have valid names in *Lycopodium*. Some of these races need further critical taxonomic investigation, especially as they retain their growth habits in cultivation, under uniform conditions.

ATTRIBUTION

Factsheet prepared by P.J. de Lange 16 March 2011. Description adapted from Chinnock (1998) and Brownsey & Smith-Dodsworth (2000).

REFERENCES AND FURTHER READING

Brownsey PJ, Smith-Dodsworth JC. 2000. New Zealand Ferns and Allied Plants. David Bateman, Auckland, NZ. 168 p.

Chinnock RJ. 1998. Lycopodiaceae. *Flora of Australia 48, Ferns Gymnosperms and allied groups*: 66–85. ABRS/CSIRO Victoria, Australia.

Field AR, Bostock PD. 2013. New and existing combinations in Palaeotropical *Phlegmariurus* (Lycopodiaceae) and lectotypification of the type species *Phlegmariurus phlegmaria* (L.) T.Sen & U.Sen. *PhytoKeys* 20: 33–51. <https://doi.org/10.3897/phytokeys.20.4007>.

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

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(Date website was queried)

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/phlegmariurus-vari/>