

Asplenium trichomanes subsp. quadrivalens

COMMON NAME

spleenwort

SYNONYMS

None

FAMILY

Aspleniaceae

AUTHORITY

Asplenium trichomanes subsp. quadrivalens Meyer

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

No

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Ferns

NVS CODE

ASPTSQ

CHROMOSOME NUMBER

2n = 144

CURRENT CONSERVATION STATUS

2017 | Threatened – Nationally Critical | Qualifiers: DP, RR, SO, Sp

PREVIOUS CONSERVATION STATUSES

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

2009 | Data Deficient | Qualifiers: SO

2004 | Data Deficient

DISTRIBUTION

Indigenous. New Zealand: North Island (known only from a few collections from the eastern Hawke's Bay where it was discovered in 2008 at a few sites). Also Australia, Europe and probably elsewhere.

HABITAT

Unclear. Apparently lowland and at one site (Tangoio) it was collected from limestone outcrops. Other than that we know very little about it. It is suspected that a few collections probably came from gardens, and their status as representing truly wild populations is suspect.

DETAILED DESCRIPTION

Plants tetraploid. **Rhizome** stout, erect, bearing dark brown subulate scales up to 5 mm long. **Stipes** 10–100 mm long, dark brown, shining, stiff, lacking scales except at the very base. **Laminae** linear, 50–300 mm long, dark green, sub-coriaceous, pinnate. **Raches** dark brown, shining, stiff, lacking scales. **Pinnae** sub-sessile, 15–25 (or more) pairs, oblong to more or less orbicular, crenate-serrate to more or less entire, 2–10 × 1–5 mm. **Sori** up to 3 mm long. **Spores** 34–39 microns long.



SIMILAR TAXA

Easily recognised by the stiff and erect, simply pinnate fronds which are < 30 mm wide; bearing > 8 pairs pinnae; and by the brown stipe and rachis which is completely without scales. Two cryptic subspecies exist, one is hexaploid ($2n = 216$) and so has larger spores and is further distinguished by having larger darker scales while subsp. *quadrivalens* is tetraploid ($2n = 144$), so has smaller spores. It has finer, smaller, lighter scales.

PROPAGATION TECHNIQUE

Difficult—should not be removed from the wild.

THREATS

Unknown. This subspecies has only been collected a few times in New Zealand and recent attempts to rediscover it at these locations have so far been unsuccessful.

ETYMOLOGY

asplenium: From the Greek a- 'without' and splene 'spleen', a northern hemisphere species, the black spleenwort (*Asplenium adiantum-nigrum*), was once believed to be a cure for diseases of the spleen.

trichomanes: From the ancient Greek name used by Theophrastus and Dioscorides, for a type of fern; refers to the slender hair projecting from each spore case

WHERE TO BUY

Not commercially available

NOTES ON TAXONOMY

The other widespread plant referred to *A. trichomanes* is a hexaploid which appears to be endemic to New Zealand (it maybe in Australia). This cytotype may yet be described as a new subspecies or even subspecies as part of a European based revision of the *A. trichomanes* complex (L. Perrie pers. comm.). Until that time we retain the name *A. trichomanes* for this widespread hexaploid fern.

ATTRIBUTION

Description from Brownsey (1977).

REFERENCES AND FURTHER READING

Brownsey PJ. 1977. A taxonomic revision of the New Zealand species of *Asplenium*. *New Zealand Journal of Botany* 15(1): 39–86. <https://doi.org/10.1080/0028825X.1977.10429618>.

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/asplenium-trichomanes-subsp-quadrivalens/>