

Achyranthes velutina

COMMON NAME

Devil's horsewhip

SYNONYMS

Achyranthes indica (L.) P. Mill., *Centrostachys aspera* (L.) Standl.

FAMILY

Amaranthaceae

AUTHORITY

Achyranthes velutina Hook. et Arn.

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

No

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Herbs - Dicotyledons other than Composites

NVS CODE

ACHVEL

CHROMOSOME NUMBER

2n = 42

CURRENT CONSERVATION STATUS

2017 | At Risk – Naturally Uncommon | Qualifiers: Inc, SO

PREVIOUS CONSERVATION STATUSES

2012 | At Risk – Naturally Uncommon | Qualifiers: SO

2009 | Non-resident Native – Coloniser | Qualifiers: SO

2004 | Non-resident Native – Coloniser

DISTRIBUTION

Known in a natural state only from Macauley Island in the southern Kermadec Island group. *A. velutina* is known from throughout the Pacific. It is *A. velutina* not *A. aspera* L. that was recorded once as naturalised from Silverdale in North Auckland in 1960.

HABITAT

Amongst sea bird burrows on the margin of steep cliffs in association with grasses and sedges.



Macauley Island. Photographer: John Barkla, Licence: CC BY.



Macauley Island. Photographer: John Barkla, Licence: CC BY.

DETAILED DESCRIPTION

Small, much branched, monoecious shrub. Rootstock stout, woody. Stems somewhat succulent at first, ribbed becoming basally woody with age ribbed, densely covered in velutinous, appressed hairs. Petioles 5-10 mm long, pink, fleshy, velutinous, basal abscission zone evident. Leaves opposite, spreading to decurved, densely clustered toward branch tips, 40-50 x 25-30 mm, dark green, green or purple-grey, margins often, suffused with pink or red, mostly broadly ovate, ovate-orbicular or elliptic; apex blunt to abruptly subacute, sometimes shortly apiculate; base attenuate; lamina fleshy, veins distinct, often purple, upper and lower surfaces silky canescent, margins crenulate to crenate. Inflorescence a terminal erect spike, 150-200 mm long. Peduncle 15 mm long, fleshy, white-villous; spike rachis fleshy, white-villous to purple-villous; flowers bisexual, retrorse, sessile, c. 180-200 per spike, initially spaced at 10 mm intervals this diminishing to < 1 mm intervals toward inflorescence apex. Bracts persistent on rachis, 3-3.5 x 0.5-1 mm, ovate to lanceolate, strongly retrorse, chartaceous, weakly keeled near apex only, pale white, margins entire, apex acute, sometimes with a small 0.1-0.2 mm long pale yellow mucro. Bracteoles 2; abscising with senescent flowers; 0.2-1 mm long, broadly ovate, chartaceous hyaline, lustrous, pale caramel; margins entire; strongly keeled, keel lustrous, caramel brown, extending well beyond bract as a hardened, channelled, strongly recurved, falcate spine 4-5 mm long. Perianth segments (sepals) 5, lanceolate, central portion pale caramel-brown, distinctly pink-tinged, margins pale yellow or off-white opaque, hairy; segments subequal, 4.5-6 mm, channelled. Stamens 4, fused at base, filaments 0.5-1 mm, alternating with 4 narrowly spatulate 0.4 x 0.6 mm white-hyaline, petaloid, fimbriate-margined pseudostaminodes; anthers 0.4-0.6 mm, yellow. Style 0.6-1 mm, pink to pale orange, arising from a fleshy papillate style base 0.8 mm diameter; stigma brown, truncate. Utricle 2-2.5 mm, dark brown, turbinate, chartaceous, surmounted by the dry somewhat woody, style base. Seed 1.2-1.8 x 0.9-1.2 mm, dark chestnut brown, ovoid to ellipsoid.

SIMILAR TAXA

None. Macauley Island plants were initially treated as *A. aspera* (de Lange et al. 2004) adopting a broad circumscription advocated by most world flora treatments. Since then it is evident that *A. aspera* s.s. is distinct from Macauley plants which are now referred here to *A. velutina* (Barkla et al. 2008). *Achyranthes aspera* differs from *A. velutina* by its annual, more gracile growth habit, smaller size, and much less pigmented, glabrescent foliage. It is not known from New Zealand.

FLOWERING

Throughout the year

FLOWER COLOURS

Orange, Red/Pink

FRUITING

Throughout the year

LIFE CYCLE

Spiny utricles are dispersed by attaching to fur, feathers and clothing (Thorsen et al., 2009)

PROPAGATION TECHNIQUE

Easy from cuttings and seed. Potentially an aggressive weed in warm climates.

THREATS

This species is only known from a single natural occurrence in New Zealand, Macauley Island in the Kermadecs. It is under no obvious threat and is apparently a recent example of a natural long distance dispersion with subsequent successful establishment on this island.

WHERE TO BUY

Not commercially available.

TAXONOMIC NOTES

The North Island record of *Achyranthes aspera* in the Webb et al. (1988) is also referred here to *A. velutina*, and in what is perhaps a rather unusual situation for the flora of New Zealand, is regarded as naturalised. Macauley plants are regarded as indigenous (see de Lange et al. 2004; Barkla et al. 2008).

ATTRIBUTION

Fact Sheet prepared for NZPCN by P.J. de Lange 1 January 2005. Description from de Lange et al. (2004) - as *Achyranthes aspera* (see taxonomic notes)

REFERENCES AND FURTHER READING

- Barkla, J.W., P.J. Dilks, T.C. Greene and R. Griffiths 2008 *Homalanthus polyandrus* (Euphorbiaceae) on Macauley Island, southern Kermadec Islands, with notes on that island's vascular flora. *New Zealand Journal of Botany* 46: 373–379.
- de Lange, P.J., R.P. Scofield and T.C. Greene 2004 *Achyranthes aspera* (Amaranthaceae) a new indigenous addition to the flora of the Kermadec Islands group. *New Zealand Journal of Botany* 42: 167–1773.
- Webb CJ, Sykes WR, Garnock-Jones PJ 1988. Flora of New Zealand. Vol. IV. Botany Division, DSIR, Christchurch.
- Thorsen, M. J.; Dickinson, K. J. M.; Seddon, P. J. 2009. Seed dispersal systems in the New Zealand flora. *Perspectives in Plant Ecology, Evolution and Systematics* 2009 Vol. 11 No. 4 pp. 285-309

NZPCN FACT SHEET CITATION

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MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/achyranthes-velutina/>