Lepidium limenophylax

COMMON NAME
Snares Island scurvy grass

SYNONYMS
None (first described in 2013)

FAMILY
Brassicaceae

AUTHORITY
Lepidium limenophylax de Lange, B.D.Rance et D.A.Norton

FLORA CATEGORY
Vascular – Native

ENDEMIC TAXON
Yes

ENDEMIC GENUS
No

ENDEMIC FAMILY
No

STRUCTURAL CLASS
Herbs - Dicotyledons other than Composites

NVS CODE
LEPLIM

CURRENT CONSERVATION STATUS
2017 | Threatened – Nationally Critical | Qualifiers: CD, DP, RR

PREVIOUS CONSERVATION STATUS
2012 | Threatened – Nationally Critical | Qualifiers: CD, DP, RR

BRIEF DESCRIPTION
Long-lived perennial herb arising from stout tap-root. Plants with sprawling, leafy branches. Leaves dark green to yellow green, with finely toothed margins, smelling of cress when crushed. Inflorescences at branch tips, Flowers white with two stamens. Fruits elliptic or rhomboid, apically notched or entire, splitting cleanly into two valves, seeds red-brown to orange-brown.

DISTRIBUTION
Endemic. South-western Titi Islands, Snares and Auckland Islands

HABITAT
On exposed coastal headlands in and around bird roosts and nesting grounds.

Snares Island. Photographer: Sue Lake, Licence: CC BY-NC.

Young and emerging inflorescences, Snares Island. Sep 2010. Photographer: Sue Lake, Licence: CC BY-NC.

DETAILED DESCRIPTION

Tap-rooted, strongly pungent smelling, summer-green, perennial herb, arising from stout rootstock 7.3–10.0 mm diameter. Plants dying down to rootstock and previous season's stem nodes during winter. Stems decumbent, bases often very stout, ± spherical, somewhat woody when mature 10–15 × 10–12 mm, composed of numerous old leaf and stem bases, sometimes producing roots, new season's grow decumbent, spreading 10–300 × 3–10 mm, glabrous, sometimes with very sparse, appressed, caducous, silky 0.5–1.0 mm long, hairs near stem apices, at fruiting, often devoid of foliage from much of length. Leaves glabrous, firmly fleshy to succulent, usually dark green to green, sometimes yellow-green. Rosette and stem leaves usually withering at fruiting but sometimes with a few long persistent. Petiole distinct, 20–40 × 2–4 mm lamina 50–100 × 5–15 mm, lanceolate, narrowly lanceolate to linear lanceolate; distal one third – two thirds finely but sharply serrated or crenate, teeth in 10–20 pairs running to and including subacute, obtuse to rounded apex (teeth not extending beyond leaf outline), base cuneate to narrowly cuneate. Middle stems leaves with petiole indistinct, lamina narrowly linear lanceolate to linear, often recurved to falcate in the distal one third - one half of leaf length, 50–120 × 3–6 mm; upper two thirds or occasionally the entire leaf finely but sharply serrated; teeth in 12–30 pairs running to and including the apex, and not extending beyond leaf outline, lamina base tapered, very narrowly cuneate. Upper stem leaves with or without a distinct petiole, petiole if present 40–60 mm, linear to linear-spathulate, occasionally narrowly lanceolate, often recurved or falcate from one half of leaf length, 30–100 × 2.0–30.0 mm, margins finely but sharply serrated. Racemes 5–15 mm long, terminal and axillary; rachis glabrous; pedicels glabrous, erecto-patent, 2–8 mm long at fruiting. Flowers c. 0.4–1.0 mm diam. Sepals 4, saccate, overlapping at base, green with pale-green to white thickened margin, apex broadly obtuse, shape and size dimorphic; lateral sepals c.0.6–1.0 × 0.6–1.2 mm, broadly ovate to oval, mostly glabrous, sometimes sparsely hairy, hairs 0.2–0.4 mm long, caducous; median sepals 0.9–1.2 × 0.5–1.2 mm, elliptic to obovate, abaxial surface sparsely hairy, hairs 0.2–0.4 mm long, caducous. Petals white to off-white, 1.5–2.0 × 0.3–1 mm, erecto-patent to somewhat spreading, clawed; limb narrowly obovate, apex obtuse, occasionally emarginated. Stamens 2, equal. Nectaries 2, subulate, 0.35 mm long. Silicles cartilaginous when fresh, coriaceous when dry, 2.5–3.5 × 1.5–3.3 mm, elliptic or rhomboid, not winged, apex usually notched (rarely truncate), valves green maturing yellow-green, glabrous; style 0.1–0.3 mm long, exceeding the shallow notch (if notch present); stigma 0.3–0.5 mm diameter. Seeds 2, narrowly ovoid, brown, red-brown to orange-brown, not winged, 1.25–1.3 × 0.35–0.60 mm.

SIMILAR TAXA

Lepidium limenophylax is recognised by the decumbent growth habit, with plants developing a distinct woody network of branches. New season's growth arises from the nodes left from the previous season's growth. In this species, the leaves are consistently lanceolate, narrowly lanceolate, linear lanceolate or linear, though slightly broader in seedlings and basal rosettes. The flowers have two stamens. Despite its long inclusion within Lepidium oleraceum DNA data reveals that L. limenophylax is the most diverged of all the L. oleraceum complex, and it has little relationship with any of the species (see de Lange et al. 2013).

FLOWERING

November - February

FLOWER COLOURS

White

FRUITING

November - February

PROPAGATION TECHNIQUE

Difficult. All attempts at cultivation have so far failed. Plants dislike humidity, and are prone to a range of garden pests and diseases.

THREATS

Outside the Snares Island group the status of this species is unclear. On the Snares recent surveys have found it to be locally common in a few sites (Lake & Ewans 2011) totalling an area of just under 1 ha. While field evidence suggests that this species is secure in its habitat on the Snares, the small area of occupancy qualifies the species for 'Threatened / Nationally Critical' status (see Townsend et al. 2008).

ETYMOLOGY

lepidium: Scale-shaped (pods)
limenophylax: Strictly speaking derived from the Greek name for a 'lake watcher' - but used in this sense to refer to 'coast watchers'. The name being in allusion to the habitat of the plant (coastal headlands) which were used in World War II by coast watchers keeping an eye out for enemy shipping (see de Lange et al. 2013)

ATTRIBUTION

P.J. de Lange (22 August 2013). Description from de Lange et al. (2013) - see references for free download link for that paper. Threats information from Fletcher et al. (2009).

REFERENCES AND FURTHER READING

de Lange, P.J.; Heenan, P.B.; Houliston, G.; Rolfe, J.R.; Mitchell, A.D. 2013: New *Lepidium* (Brassicaceae) from New Zealand. Phytokeys 24:1-147pp. , doi: 10.3897/phytokeys.24.4375.
Lake S, Evans R (2011) Population census and monitoring of *Lepidium* aff. *oleraceum* (c) (CANU 5995; Snares Islands) on Snares Islands, October 2010. Department of Conservation File note, Invercargill.
Townsend AJ, de Lange PJ, Norton DA, Molloy J, Miskelly C, Duffy C (2008) The New Zealand Threat Classification System manual. Department of Conservation: Wellington.
http://www.doc.govt.nz/publications/conservation/nz-threat-classification-system/nz-threat-classification-system-manual-2008/

NZPCN FACT SHEET CITATION

Please cite as: de Lange, P.J. (Year at time of access): Lepidium limenophylax Fact Sheet (content continuously updated). New Zealand Plant Conservation Network.
https://www.nzpcn.org.nz/flora/species/lepidium-limenophylax/ (Date website was queried)

MORE INFORMATION

https://www.nzpcn.org.nz/flora/species/lepidium-limenophylax/