

# **Lepidium crassum**

## **COMMON NAME**

thick-leaved scurvy grass

## **SYNONYMS**

None (first described in 2013).

## **FAMILY**

Brassicaceae

## **AUTHORITY**

*Lepidium crassum* Heenan et de Lange

## **FLORA CATEGORY**

Vascular – Native

## **ENDEMIC TAXON**

Yes

## **ENDEMIC GENUS**

No

## **ENDEMIC FAMILY**

No

## **STRUCTURAL CLASS**

Herbs - Dicotyledons other than Composites

## **CURRENT CONSERVATION STATUS**

2017 | Threatened – Nationally Endangered | Qualifiers: CD, DP, EF, RR

## **PREVIOUS CONSERVATION STATUS**

2012 | Threatened – Nationally Endangered | Qualifiers: CD, DP, EF, RR

## **BRIEF DESCRIPTION**

Perennial, strongly aromatic (smelling of cress) herb arising from stout tap-root. Plants with numerous, densely packed leafy branches. Leaves dark green, margins finely serrated, often doubly so. Inflorescences at branch tips, Flowers white with four stamens. Fruits circular, apices rounded or slightly notched, splitting cleanly into two valves, seeds brown or orange-brown.

## **DISTRIBUTION**

Endemic. New Zealand (South Island - historically upper Waitaki, otherwise easterly from Oamaru south to Otago Peninsula)

## **HABITAT**

Coastal headlands and rocky outcrops where it grows in disturbed open areas and among coastal herbfield. Also recorded from man made structures such as the Mole at Aramoana.



Aramoana Mole. Nov 2009. Photographer: Peter B. Heenan, Licence: CC BY-NC.



Leafy stem of *Lepidium crassum* showing basal leaves. May 2009. Photographer: Peter B. Heenan, Licence: CC BY-NC.

## DETAILED DESCRIPTION

Tap-rooted, strongly pungent smelling, perennial herb. Growth habit dense, stems closely placed, up to 0.5m tall, arising from underground woody stems. Stems upright to spreading, stout, short, rigid; mature stems woody, 100–400 × 10–12 mm, often devoid of foliage on middle and lower parts of stems, new stems 50–200 × 4–5 mm, leafy, glabrous. Leaves glabrous, coriaceous, green, undulate, rosette and stem leaves usually withering, variable in size and shape. Leaves of young and vigorous plants and stems: lamina 50–90 × 17–35 mm, broadly elliptic, elliptic to obovate; apex obtuse to truncate, often with up to 3 or 4 teeth; margin singly or doubly crenate, with 15–32 pairs of teeth; teeth up to 3.5 mm deep, sometimes overlapping, often protruding beyond leaf outline; base cuneate, petiole usually distinct; petiole up to 35.0 × 3.0–6.0 mm, channelled. Leaves of mature plants and caudine stems: lamina 15–45 × 6–15 mm, broadly elliptic, elliptic-obovate to obovate-oblong; apex obtuse to truncate, often with up to 3 or 4 teeth; margin singly crenate in upper half, teeth often protruding from leaf outline, with 5–10 pairs of teeth; teeth up to 1.2 mm deep, not overlapping, often protruding beyond leaf outline; base cuneate, sometimes narrowly so, usually tapering to ± distinct petiole; petiole 5–12 × 1.6–2.3 mm, channelled. Inflorescence terminal and lateral, racemose, 15–60 mm long, rachis 0.7–1.2 mm diameter, glabrous; pedicels 4–7 mm long, erecto-patent, glabrous. Flowers 4.0–5.0 mm diameter. Sepals 4, 1.3–1.6 mm long, saccate, overlapping at base, green, apex obtuse, margin white, shape dimorphic; lateral sepals broad, 1.4–1.5 mm diameter, orbicular, abaxial surface often hairy, hairs 0.2–0.5 mm long; median sepals narrow, 1.0–1.3 mm diameter, broadly elliptic, glabrous. Petals white, 1.8–2.0 × 1.0–1.1 mm, spreading, claw 0.6–0.8 mm long; limb broadly elliptic to orbicular, apex obtuse to rounded. Stamens 4; filaments 1.2–1.6 mm long, base 0.4–0.5 mm diameter, equal; anthers 0.4–0.6 mm long. Ovary 1.0–1.6 × 0.9–1.1 mm, broadly ovate to broadly elliptic, green to green-brown, apex round or sometimes weakly shouldered; style 0.15–0.3 mm long, cylindrical; stigma 0.2–0.4 mm diameter. Nectaries 4, 0.2–0.3 × 0.1–0.15 mm, oblong to oblong-triangular, green. Silicles cartilaginous when fresh, coriaceous when dry, 3.0–3.7 × 2.6–3.1 mm, orbicular to orbicular-rhomboid, apex obtuse to shallowly notched, valves pale brown, glabrous, not winged; style 0.2–0.3 mm long, exserted. Seeds 1.6–1.7 × 0.9–1.1 mm, narrowly ovoid, brown to orange-brown, not winged.

## SIMILAR TAXA

*Lepidium crassum* differs from the related *L. oleraceum* by its usually much smaller stature and seasonal growth habit (with plants dying back to a basal rosette overwinter). *Lepidium crassum* has distinctly petiolate, uniformly broadly elliptic, elliptic to obovate, thickly coriaceous, often doubly crenate leaves with obtuse to truncate apices. Its silicles are usually orbicular, sometimes orbicular-rhomboid, and with obtuse to shallowly notched apices. DNA sequence data places *L. crassum* with *L. aegrum*, *L. juvencum* and *L. seditiosum*, a clade sister to *L. oleraceum* (see de Lange et al. 2013).

## FLOWERING

December - March

## FRUITING

January - July

## PROPAGATION TECHNIQUE

Easily grown from fresh seed but often difficult to maintain in cultivation. Susceptible to a wide range of diseases and pests.

## THREATS

*Lepidium crassum* is virtually confined to the Otago Peninsula though historically it ranged from the upper Waitaki River and Oamaru south to the Catlins Coast. It is estimated that there are less than 1000 plants left in the wild, of which the largest population numbers about 300 plants (see de Lange et al. 2013). The few remaining populations are extremely vulnerable to stochastic events.

## ETYMOLOGY

**lepidium:** Scale-shaped (pods)

**crassum:** Thick

## ATTRIBUTION

P.J. de Lange (20 August 2013). Description from de Lange et al. (2013) - see references for free download link for that paper.

## **REFERENCES AND FURTHER READING**

de Lange, P.J.; Heenan, P.B.; Houlston, G.; Rolfe, J.R.; Mitchell, A.D. 2013: New *Lepidium* (Brassicaceae) from New Zealand. *Phytokeys* 24:1-147pp. , doi: [10.3897/phytokeys.24.4375](https://doi.org/10.3897/phytokeys.24.4375).

## **NZPCN FACT SHEET CITATION**

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

## **MORE INFORMATION**

<https://www.nzpcn.org.nz/flora/species/lepidium-crassum/>