

Lepidium sisymbrioides

COMMON NAME

Kawarau cress

SYNONYMS

Lepidium sisymbrioides Hook.f. subsp. *sisymbrioides*, *Lepidium kawarau* Petrie. *Lepidium sisymbrioides* subsp. *ovatum* Thell., *L. kawarau* var. *dubium* Kirk

FAMILY

Brassicaceae

AUTHORITY

Lepidium sisymbrioides Hook.f.

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

Yes

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Herbs - Dicotyledons other than Composites

NVS CODE

LEPSIS

CHROMOSOME NUMBER

2n = 56

CURRENT CONSERVATION STATUS

2017 | Threatened – Nationally Critical | Qualifiers: DP

PREVIOUS CONSERVATION STATUSES

2012 | Threatened – Nationally Endangered | Qualifiers: DP

2009 | Threatened – Nationally Endangered | Qualifiers: DP, Sp

2004 | Threatened – Nationally Endangered

DISTRIBUTION

Endemic. New Zealand: South Island (North and Central Otago. Known in north Otago from south side of upper Waitaki, and from Central Otago near Falls Dam in upper Manuherika Gorge and from the Kawarau Gorge near Cromwell.

HABITAT

Schist and limestone outcrops and cliff faces. Also on sparsely vegetated clay pan and salt licks overlying limestone talus and semi-saline soils.



Nevis Bluff. Mar 1995. Photographer: David A. Norton, Licence: CC BY-NC.



Flowering plant. Photographer: John Barkla, Licence: CC BY.

DETAILED DESCRIPTION

Perennial dioecious herb, with up to 15 compact, leafy rosettes. **Rootstock** deep rooted, up to 20 mm diam. near crown; stems spreading to erect, up to 25 mm long and 6.0 mm wide. **Basal and lower stem leaves** persistent, pinnatifid, pinnate, to bipinnatifid, narrow-oblong to oblong, up to 120–(190) mm long, green or green-brown, central part of lamina 1.0–3.4 mm wide; pinnae in 6–25 pairs, linear to lanceolate, usually recurved, with 1–6 secondary pinnae, terminal pinnae 7.8–30.0 × 0.9–2.9 mm, lateral pinnae 8.0–28.9 × 0.8–2.7 mm. **Middle stem leaves** similar, often becoming shallowly pinnatifid, serrate, or entire. **Cauline leaves** 8.3–25.6 × 1.6–6.2 mm, with up to 8 narrow or small lobes, or entire. **Inflorescences** terminal, 2–40 cm long, 1.0–5.6 mm diameter at base, usually ascending or erect, sometimes spreading, with up to 12 lateral branches, glabrous to sparsely hairy; pedicels 2.7–6.4 mm long, 0.25–0.35 mm wide, slightly recurved, adaxial surface glabrous to moderately hairy, abaxial surface glabrous. **Flowers** up to 4 mm wide. **Sepals** 0.7–1.0 × 0.6–1.6 mm, green to maroon, glabrous to sparsely hairy, sometimes moderately hairy, margins scarious, apex obtuse. **Petals** present or absent, when present spreading and clawed, white, limb obovate, apex obtuse to emarginate; males: 1.5–2.2 mm long; females 1.2–1.5 mm long. **Female flowers:** ovary 1.0–2.7 × 0.8–1.9 mm, ovate, orbicular, to rhomboid, glabrous to sparsely hairy, sometimes moderately hairy; style 0.1–1.1 mm long; stigma 0.2–0.4 mm wide; 4–7 staminodes, 0.6–1.4 mm long. **Male flowers:** 4–6 stamens, 1.6–3.0 mm long, white; anthers 0.3–0.4 mm long, white or maroon; ovary rudimentary, 0.2–0.9 × 0.3–0.9 mm. **Nectaries** 0.2–0.6 mm long, oblong, green to green-red. **Siliques** 3.5–5.0 × 1.9–4.6 mm, usually ovate to rhomboid, sometimes orbicular, suture usually maroon, apex emarginate to retuse, style base often persistent. **Seed** usually obovate, rarely obovate-oblong, straighter along one margin, compressed but with broad rounded margins, 1.5–2.5 mm long, not winged; both surfaces with a distinct groove from hilum at base towards apex, and the seed folded around it; apex broad and rounded; base cuneate or slightly rounded. **Testa** dull, orange or orange-brown to dark henna, with a fine reticulum of very thick walled cells.

SIMILAR TAXA

Distinguished from *Lepidium solandri* by longer, narrower cauline leaves, longer terminal and primary pinnae with more frequent secondary lobing; less hairy sepals and ovaries; narrower ovaries; shorter stamen filaments; and ecology.

FLOWER COLOURS

Red/Pink, White

FRUITING

December–March

LIFE CYCLE

Mucilaginous seeds are dispersed by attachment and possibly wind and water (Thorsen et al., 2009).

PROPAGATION TECHNIQUE

Easily grown from fresh seed. Dislikes excessive moisture and humidity.

THREATS

Fewer than 800 plants are known in the wild. Few sites on protected land. At all sites threatened by weed competition, animal browsing, and for most sites changes in land-use management.

ETYMOLOGY

lepidium: Scale-shaped (pods)

WHERE TO BUY

Not commercially available.

TAXANOMIC NOTES

One of only two dioecious Lepidium taxa in the world.

ATTRIBUTION

Description from Heenan et al. (2007).

REFERENCES AND FURTHER READING

Allen RB. 2000. Inland *Lepidium* recovery plan 2000–2010. *Threatened Species Recovery Plan 32*. Department of Conservation, Wellington, NZ. 25 p.

Heenan PB, Mitchell AD, McLenachan PA, Lockhart PJ, de Lange PJ. 2007. Natural variation and conservation of *Lepidium sisymbrioides* Hook.f. and *L. solandri* Kirk (Brassicaceae) in South Island, New Zealand, based on morphological and DNA sequence data. *New Zealand Journal of Botany* 45(1): 237–264.

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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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<https://www.nzpcn.org.nz/flora/species/lepidium-sisymbrioides/> (Date website was queried)

MORE INFORMATION

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