

Ranunculus callianthus

SYNONYMS

None - first described in 2019

FAMILY

Ranunculaceae

AUTHORITY

Ranunculus callianthus Molloy et Heenan

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

Yes

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Herbs - Dicotyledons other than Composites

CHROMOSOME NUMBER

2n = 48

CURRENT CONSERVATION STATUS

2017 | Threatened – Nationally Critical | Qualifiers: OL

BRIEF DESCRIPTION

A limestone inhabiting buttercup similar to the Stewart Island/Rakiura endemic *Ranunculus stylosus*, from which it differs by its more robust growth habit, larger leaves, petiole and peduncle with patent and white hairs, larger flower and petals, abaxial surface of the sepals and petals pale yellow, more stamens and carpels per flower, bifid nectary scale, and by the achene which has a strongly curved beak.

DISTRIBUTION

Endemic. New Zealand: South Island (South Canterbury: Tengawai River, near Albury).

HABITAT

Confined to limestone outcrops.



DETAILED DESCRIPTION

Rosettes single or forming compact patches comprising several tightly placed rosettes, appressed to the ground in exposed sites but taller in the shelter of rocks and other vegetation. **Lamina** 10–28 × 8–26 mm, broad rhomboid, rhomboid or orbicular-deltoid, glossy, coriaceous, stiff, dark green, black-brown on proximal veins and at sinus lobe; 3–(5)-lobed, often to about halfway across lamina, adaxial and abaxial surfaces sparsely to moderately hairy with shaggy, loosely appressed white hairs, hairs up to 1.8 mm long; base cuneate to obtuse; margin crenate or serrate, sparsely to moderately hairy; apex of main and lateral lobes subacute, with white hydathode on abaxial surface. **Petioles** 10–70 mm long, green, dark-mottled hairs patent and sparse to dense; basal sheath broad, membranous, glabrous to sparsely hairy, entire, margin sometimes sparsely hairy. **Peduncle** 15–140 mm long, up to 3 mm diameter, spreading to ascending, strongly recurved in fruit; dark green and dark-mottled throughout, hairs moderate to dense, patent, white; bracts usually absent, sometimes or 1–2 simple narrow bracts. **Flowers** 1–(2), 21–30 mm diam. **Sepals** 5, 5.5–10.0 × 2.5–4.0 mm, yellow-green, caducous, abaxial surface sparsely to moderately hairy, adaxial surface glabrous, margin translucent, apex obtuse. **Petals** 5, 11.0–15.0 × 5.0–7.5 mm, obovate-oblong, glossy, yellow with yellow-brown basal blotch above, pale yellow below. **Nectary** c. 1.0 mm from base of petal; scale c. 1.0 mm long, oblong or broad-oblong, apex bifid. **Stamens** 28–38; filaments 2.0–4.0 mm long, white; anthers 1.3–1.8 mm long, yellow; receptacle sparsely to moderately hairy; carpels 11–20, 3.0–4.0 mm long. **Achenes** 11–20, yellow-brown with red to red-black blotches, 4.5–6.5 mm long, ellipsoid, lateral faces compressed; body 3.0–3.5 × 2.0–2.7 mm; beak strongly curved, 1.6–3.0 mm long.

SIMILAR TAXA

Ranunculus callianthus is most similar to the Stewart Island/Rakiura endemic *R. stylosus*. From that species *Ranunculus callianthus* differs by its more robust growth habit, larger leaves, petiole and peduncle with patent and white hairs, larger flower and petals, abaxial surface of the sepals and petals pale yellow, more stamens and carpels/achenes per flower, nectary scale with bifid apex, and the achene with a strongly curved beak. *Ranunculus callianthus* also has $2n = 48$ chromosomes whereas *R. stylosus* has $2n = 32$. *Ranunculus callianthus* is also similar to some forms of *R. foliosus*, a species which usually has duller and often membranous leaves, fulvous hairs, one or several flowers per stem, flowers that are sometimes apetalous, and 30–60 achenes per head.

FLOWERING

Unknown

FLOWER COLOURS

Yellow

FRUITING

Unknown

PROPAGATION TECHNIQUE

Not known from cultivation.

THREATS

As *Ranunculus* aff. *stylosus* (CHR 515131; Manahune), *R. callianthus* has been assessed as 'Threatened /Nationally Critical' (Criteria A1 (< 250 mature individuals)) by de Lange et al. (2018), with the qualifier OL (one location). The one location refers to the prominent limestone scarp that runs parallel to the Tengawai River from Manahune to near Albury, from where four subpopulations have been recorded (Heenan & Molloy 2019). Heenan & Molloy (2019) note that the total number of plants has declined by about 74% in twelve years. The decline they attribute to competition with exotic weeds, degradation of associated indigenous vegetation, poor growth, and changed farm practices.

ETYMOLOGY

ranunculus: From the Latin 'rana' frog, meaning little frog and probably refers to the plants typical marshy habit where frogs abound

callianthus: From 'calli' (beautiful), 'anthus' (flower) i.e. 'beautiful flower'

ATTRIBUTION

Fact sheet prepared by P.J. de Lange (5 September 2019). Description from Heenan & Molloy (2019).

REFERENCES AND FURTHER READING

de Lange PJ, Rolfe JR, Barkla JW, Courtney SP, Champion PD, Perrie LR, Beadel SM, Ford KA, Breitwieser I, Schönberger I, Hindmarsh-Walls R, Heenan PB, Ladley K. 2018. Conservation status of New Zealand indigenous vascular plants, 2017. *New Zealand Threat Classification Series 22*. Department of Conservation, Wellington, NZ. 82 p. <https://www.doc.govt.nz/globalassets/documents/science-and-technical/nztcs22entire.pdf>.

Heenan PB, Molloy BPJ. 2019. Five new and Nationally Threatened taxa of *Brachyscome*, *Cardamine*, *Convolvulus*, *Geranium* and *Ranunculus* obligate to vulnerable limestone habitats, eastern South Island, New Zealand. *Phytotaxa* 415(1): 32–48. <https://doi.org/10.11646/phytotaxa.415.1.2>.

NZPCN FACT SHEET CITATION

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

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/ranunculus-callianthus/>