



Spartina Team Threatened Plants Mission



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The Spartina team is ideally placed to make observations of threatened or data-deficient species in an environment not often explored - our local estuaries and coastlines.

Should you find something of interest, or something you do not recognize that you think could be significant, please make an iNaturalist record, take a waypoint and a sample, and notify the Sounds threatened plants ranger (currently rlerew@doc.govt.nz).

These four species are of particular interest. Any sightings of *Euphorbia glauca* would also be of value.

Korthalsella salicornioides

COMMON NAME

Dwarf mistletoe

SYNONYMS

Viscum salicornioides A.Cunn.

FAMILY

Viscaceae

AUTHORITY

Korthalsella salicornioides (A.Cunn.) Tiegh.

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

Yes

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Trees & Shrubs - Dicotyledons

NVS CODE

KORSAL

CHROMOSOME NUMBER

2n = 28

CURRENT CONSERVATION STATUS

2018 | Threatened – Nationally Critical

PREVIOUS CONSERVATION STATUSES

2012 | At Risk – Naturally Uncommon | Qualifiers: Sp

2009 | At Risk – Naturally Uncommon | Qualifiers: EF

2004 | Sparse

BRIEF DESCRIPTION

Dense mass of green to reddish-yellow beaded succulent stems to 10cm long growing on twigs of another plant (mainly manuka and kanuka). Leaves (stems) 3-10mm long by 1-3mm wide, round. Flowers tiny, fruit small, yellowish.

DISTRIBUTION

Endemic. North, South and Stewart Islands. From Te Pahi south - easily overlooked.

HABITAT

Coastal to upper montane and subalpine (0-1300 m a.s.l.). A parasite found in forest and shrublands. Most commonly found parasitic on *Leptospermum scoparium* J.R.Forst. et G.Forst. (kahikatoa/manuka) and members of the *Kunzea ericoides* (A.Rich.) Joy Thoms. (Rawiri/Titiri/Kanuka) complex.



Black Jack. Photographer: John Smith-Dodsworth



A *Korthalsella* plant growing on manuka. Photographer: Andrew Townsend

FEATURES

Hemiparasitic, succulent, much branched, green, yellow-green, red-green to orange-green plant parasitising exposed branches and branchlets of host. Haustoria internal, dark green, encircling stele of host. Plants 30-100 x 10-450 mm, erupting from host bark, individual aerial structures lasting from 1-4 years before dehiscing and resprouting. Branches arising at narrow angles; Internodes terete, succulent to subsucculent, 3-10 x 1-3 mm, narrowed to a finely constricted node. Collar truncate, up to 0.5 mm long, sheathing at nodes. Flowers scarcely differentiated from barren stems, 3-10 x 1 mm. Fruit 1.5 mm long, ovoid to globular, dispersed by birds or ejected under hydraulic pressure

SIMILAR TAXA

None - the two other species of *Korthalsella* Tiegh. endemic to New Zealand have flattened internodes and fewer branches arising at wider angles.

FLOWERING

October - March

FRUITING

October - May

LIFE CYCLE

Fleshy berries are dispersed by ballistic projection, attachment and possibly frugivory (Thorsen et al., 2009).

PROPAGATION TECHNIQUE

Difficult - should not be removed from the wild

THREATS

An apparently naturally uncommon and biologically sparse species which can on occasion be locally abundant, but is more usually known from large parts of its likely range by only spot or scattered occurrences. In some parts of its range it is seriously at risk due to the felling of its main host species (*Leptospermum* and *Kunzea*) for fire wood and also to clear land for farming or pine plantations.

ETYMOLOGY

korthalsella: After Korthals, botanist

salicornioides: Like *Salicornia* (glasswort)

WHERE TO BUY

Not commercially available

HOSTS

The most host specific of the three New Zealand species of the genus, the favoured host is *Leptospermum scoparium* followed by *Kunzea ericoides* s.l. However *Sophora chathamica* Cockayne, *Myrsine australis* (A.Rich.) Allan, *Dracophyllum acerosum* Bergg., *Melicope simplex* A.Cunn. and *Gaultheria antipoda* G.Forst. are sometimes also parasitised.

ATTRIBUTION

Fact sheet prepared by P.J. de Lange for NZPCN (1 June 2013)

REFERENCES AND FURTHER READING

Cameron, E.K. 2001. *Korthalsella salicornioides* discovered close to Auckland city. *Auckland Botanical Society Journal*, 56: 53-54

Nickrent, D.L.; Malécot, V.; Vidal-Russell, R.; Der, J.P. 2010: A revised classification of Santalales. *Taxon* 59: 538-558.

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* 11: 285-309

CITATION

Please cite as: de Lange, P.J. (Year at time of access): *Korthalsella salicornioides* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network.

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

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/korthalsella-salicornioides/>

Ranunculus macropus

COMMON NAME

swamp buttercup

SYNONYMS

Ranunculus longipetiolatus Colenso

FAMILY

Ranunculaceae

AUTHORITY

Ranunculus macropus Hook.f.

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

Yes

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Herbs - Dicotyledons other than Composites

NVS CODE

RANMAC

CHROMOSOME NUMBER

2n = 96

CURRENT CONSERVATION STATUS

2012 | Data Deficient

PREVIOUS CONSERVATION STATUSES

2009 | Data Deficient

2004 | Gradual Decline

DISTRIBUTION

Endemic to the North and northern South Islands. In the North Island formerly widespread from the northern Waikato south to Wellington. Most recent collections come from the western Waikato, Rotorua Lakes District and East Cape to Hawkes Bay. In the South Island, apparently always scarce, and there seem to have been few collections made over the last 20 or so years. Recently (2010) a population was found at Canadian Flats on the Taieri River in Otago, and scattered populations are present in wetlands on the Canterbury Plains west of Christchurch, and at Te Waihora/Lake Ellesmere.

HABITAT

Coastal to lowland. Usually found in raupō (*Typha orientalis*) dominated wetlands where it grows in still moderately deep to deep water.



Flower, Taupo Swamp. Plimmerton.
Photographer: Colin Ogle



Ranunculus macropus. Photographer: John Smith-Dodsworth

FEATURES

Semi-aquatic to aquatic herb. Rosettes tufted on stout creeping stems. Basal leaves on very stout petioles (7-15-30(-40) mm x 5-10 mm, arising from bulbous nodes. Leaves ternate (15-)-20-40(-80) mm wide, leaflets sessile or shortly stalked, cuneiform, shallowly 3-fid, apices crenate, serrate or entire, lateral leaflets slightly to distinctly larger than terminal, cauline leaves few, similar to basal but smaller. Flowers (1-)3-5 per stem, 10-15(-20) mm diam., pedicels glabrous. Sepals spreading or weakly recurved, glabrous. Petals (1-)3-5(-7), dark yellow, oblong to broadly oblong, shortly clawed, nectary single, 0.5-1(-1.5) mm from petal base. Receptacle with basal collar of bristles. Achenes 15-50(-65), hardly flattened, glabrous 1.5-2 mm, beak straight, 1-1.5 mm long.

SIMILAR TAXA

Confused with *R. amphitrichus* and *R. glabrifolius*. Species hybridizes with *R. amphitrichus*, the progeny of which are fertile (P. J. de Lange pers. obs.). Species is distinguished by the larger flower, with broad, irregularly spaced, oblong petals, whose nectary scale is virtually obscured by a dense cluster of carpels when viewed from above. In good habitat and growing conditions *R. macropus* is a very robust plant with very large, ternate leaves borne on stout petioles.

FLOWERING

September - April (but sporadic flowering may occur at anytime of the year)

FLOWER COLOURS

Yellow

FRUITING

October - July

PROPAGATION TECHNIQUE

Easy from the division of whole plants and from fresh seed. A wetland species which requires permanently damp but sunny situations, Good in shallow ponds.

THREATS

Threatened by wetland drainage, modification and the spread of weeds. In large parts of its former range hybrids are now more commonly encountered than the actual species.

ETYMOLOGY

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

macropus: Big foot

WHERE TO BUY

Not commercially available.

TAXONOMIC NOTES

This species seems to be a shy flowerer, and is more often found in a sterile, vegetative state than reproductive. This trait is carried over into F1 hybrids. Hybrids are common wherever wetlands containing this species and *R. amphitrichus* have been modified, e.g, the wetlands of the lower Waikato. The taxonomic distinctiveness of *Ranunculus macropus* needs further study. It is truly, as Cheeseman (1925) makes clear a 'critical species'.

ATTRIBUTION

Fact Sheet prepared by P.J. de Lange (30 August 2003). Description based on Allan (1961), Webb et al. (1988) and fresh specimens.

REFERENCES AND FURTHER READING

Allan, H.H. 1961: Flora of New Zealand. Vol. I. Wellington, Government Printer

Cheeseman, T.F. 1925: *Manual of the New Zealand Flora*. Wellington, Government Printer.

Webb, C.J.; Sykes, W.R.; Garnock-Jones, P.J. 1988: *Flora of New Zealand. Vol. IV*. Christchurch, DSIR Botany Division.

CITATION

Please cite as: de Lange, P.J. (Year at time of access): *Ranunculus macropus* Fact Sheet (content continuously updated). New Zealand Plant Conservation Network.

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

MORE INFORMATION

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

Althenia bilocularis

SYNONYMS

Lepilaena bilocularis Kirk

FAMILY

Potamogetonaceae

AUTHORITY

Althenia bilocularis (Kirk) Cockayne

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

No

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Herbs - Monocots

NVS CODE

LEPBIL

CURRENT CONSERVATION STATUS

2012 | Threatened – Nationally Vulnerable | Qualifiers: RR, SO, Sp

PREVIOUS CONSERVATION STATUSES

2009 | At Risk – Naturally Uncommon | Qualifiers: SO

2004 | Sparse

DISTRIBUTION

Indigenous. Known from North, South and Chatham Islands. Also present in Australia.

HABITAT

Aquatic herb of lakes, brackish water, or slow-flowing rivers. Usually found in shallow fresh water habitats not far from the coast.

FEATURES

Annual, summer-green, submerged, rhizomatous herb forming small patches. Stems up to 20 cm long, thread-like, usually unbranched. Internodes 1-4 cm long. Leaves regularly alternate, leaf-base at first sheathing stem, to 4 mm long, becoming fibrous with age, leaf-blade 2.5-3.5 x 1 mm, entire, 1- or 3- nerved, with nerves extending to the squarely truncate tip. Flower enclosed within leaf-bases. Both sexes in separate positions on the same plant. Male on small 5 mm stalk (pedicel), stamen solitary, anther 2 x 0.6 mm, sickle-shaped, with 2 pollen sacs. Female shortly stalked (pedicellate), perianth-segments narrow-oblong, lacerate, 1.5 x 0.5 mm. Carpels 3(-4), style narrower than ovary, stigma funnel-shaped with long feathery margins. Seed (achene) 1.5-2 x 0.5 mm., asymmetrically oblong, yellow, smooth, narrowing above to style remnant c. 1 mm long.

SIMILAR TAXA

Althenia is most likely to be confused with *Zannichellia palustris* which is a superficially similar indigenous aquatic herb of much the same habitats. *Zannichellia* differs from *Althenia* by its much-branched floating habit, in having leaves arranged in false whorls of 3-4, and by the flowers arranged together within the sheathing bracts. Submerged plants of *Schoenus maschalinus* (Cyperaceae) are also superficially similar, but these are much branched, and will not flower when submerged.

FLOWERING

Flowers can be present throughout the year

FRUITING

Fruit can be present throughout the year

PROPAGATION TECHNIQUE

No information available.

THREATS

As the result of field surveys it is clear that *Althenia bilocularis* is biologically sparse in its distribution. In the northern part of its range it seems to have been especially uncommon and there more than anywhere else is where it has undergone some range contraction. However, that loss is insufficient to justify its listing as Threatened.

TAXONOMIC NOTES

Althenia bilocularis was initially placed in the genus *Lepilaena*, as *L. bilocularis* by Thomas Kirk who discovered it and described it (Kirk 1896). Later Cockayne (1927) placed *Lepilaena bilocularis* in *Althenia*, a decision that was not followed by Moore & Edgar (1970). Subsequently using a combination of molecular and morphological data Ito et al. (2016) confirmed the opinion of Cockayne (1927) and resurrected his combination in *Althenia* and this is followed here.

ATTRIBUTION

Fact Sheet prepared for NZPCN by P.J. de Lange 14 April 2007: Description adapted from Moore and Edgar (1970).

REFERENCES AND FURTHER READING

- Cockayne, L.C. in Speight, R., Wall, A. & Laing, R.M. (ed.) 1927: Ecological botany of the Canterbury Plains. *Natural History of Canterbury*: 126
- Ito, Y.; Tanaka, N.; García-Murillo, P.; Muasya, A.M. 2016: A new delimitation of the Afro-Eurasian plant genus *Althenia* to include its Australasian relative, *Lepilaena* (Potamogetonaceae)—evidence from DNA and morphological data. *Molecular Phylogenetics and Evolution* 98: 261-270.
- Kirk, T. 1896: Art. LII: Notes on Certain Veronicas, and descriptions of new species. *Transactions and Proceedings of the New Zealand Institute* 28: 500.
- Moore, L.B.; Edgar, E. 1970: Flora of New Zealand. Vol. II. Government Printer, Wellington.

CITATION

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

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/althenia-bilocularis/>

Juncus pauciflorus

COMMON NAME

leafless rush

SYNONYMS

Juncus gunnii Hook.f., *J. pauciflorus* var. *gunnii* (Hook.f.) Buch.

FAMILY

Juncaceae

AUTHORITY

Juncus pauciflorus R.Br.

FLORA CATEGORY

Vascular – Native

ENDEMIC TAXON

No

ENDEMIC GENUS

No

ENDEMIC FAMILY

No

STRUCTURAL CLASS

Rushes & Allied Plants

NVS CODE

JUNPAU

CURRENT CONSERVATION STATUS

2012 | Threatened – Nationally Vulnerable | Qualifiers: DP, SO, Sp

PREVIOUS CONSERVATION STATUSES

2009 | At Risk – Declining | Qualifiers: DP, SO, Sp

2004 | Not Threatened

DISTRIBUTION

Indigenous. North, South and Stewart Islands. Present in Australia

HABITAT

Coastal to lowland (often on northern offshore islands) in damp ground and hollows under light scrub, in pasture, on swamp margins, in dune swales under scrub or within coastal forest.

FEATURES

Slender, clumps with sprawling to almost lianoid stems spreading widely from base. Rhizome 2-3 mm diameter, horizontal, near surface or above ground, easily pulled from soil. Flowering stems 0.25-1.00 m long, 0.75-2.00 mm diameter, bright green to reddish green, smooth, glossy to lustrous, internal pith continuous; leaves absent; basal bracts very short, conspicuously dark red-brown, closely sheathing. Inflorescence apparently lateral, rather lax and open, with flowers evenly spaced, often rather remote, on slender, flexible, more or less curved branchlets. Flowers 2.5-3.0 mm long; tepals light greenish brown. Stamens 6. Capsule 2.5-3.5 mm long, usually distinctly > tepals, ovoid to almost oblong, light brown to red-brown, often very dark towards apex.



Herbarium specimen: AK 151734. Photographer: Jeremy Rolfe, photographed with permission of Auckland Institute and Museum



Herbarium specimen: AK 151734. Photographer: Jeremy Rolfe, photographed with permission of Auckland Institute and Museum.

SIMILAR TAXA

The rather widely spreading, loose, almost floppy, lianoid, bright green stems and slender, flexible branchlets are especially distinctive. Because it has continuous pith and six stamens it usually keys out with *J. pallidus* R.Br., which is a very different, robust rush up to 2 m tall, with broad (3-8 mm diameter) erect, light green to glaucous, soft rather than wiry stems.

FLOWERING

November - January

FLOWER COLOURS

Brown, Green

FRUITING

November - April

LIFE CYCLE

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

PROPAGATION TECHNIQUE

Easy from fresh seed. Can be grown from rooted pieces and by the division of whole plants but resents root disturbance.

THREATS

Rather uncommon

ETYMOLOGY

juncus: From the Latin *jungere* 'to tie or bind', the stems of some species being used to make cord (Johnson and Smith)

pauciflorus: Few flowers

ATTRIBUTION

Moore, L.B.; Edgar, E. 1970: Flora of New Zealand. Vol. I. Government Printer, Wellington.

REFERENCES AND FURTHER READING

Johnson, A. T. and Smith, H. A (1986). Plant Names Simplified: Their pronunciation, derivation and meaning. Landsman Bookshop Ltd: Buckenhill, UK.

Moore, L.B.; Edgar, E. 1970: Flora of New Zealand. Vol. I. Government Printer, Wellington.

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 11: 285-309

MORE INFORMATION

<https://www.nzpcn.org.nz/flora/species/juncus-pauciflorus/>