

Ranunculus diminutus

brackish buttercup

TASMANIAN THREATENED SPECIES NOTESHEET



Image by A.J. Brown

Scientific name: *Ranunculus diminutus* B.G.Briggs, *Telopea* 5(4): 583 (1994)

Common name: brackish buttercup (Wapstra et al. 2005)

Group: vascular plant, dicotyledon, family **Ranunculaceae**

Status: *Threatened Species Protection Act 1995:* **endangered pending**
Environment Protection and Biodiversity Conservation Act 1999: **Not listed**

Distribution: Endemic status: **not endemic**
Tasmanian NRM Region(s): **North**

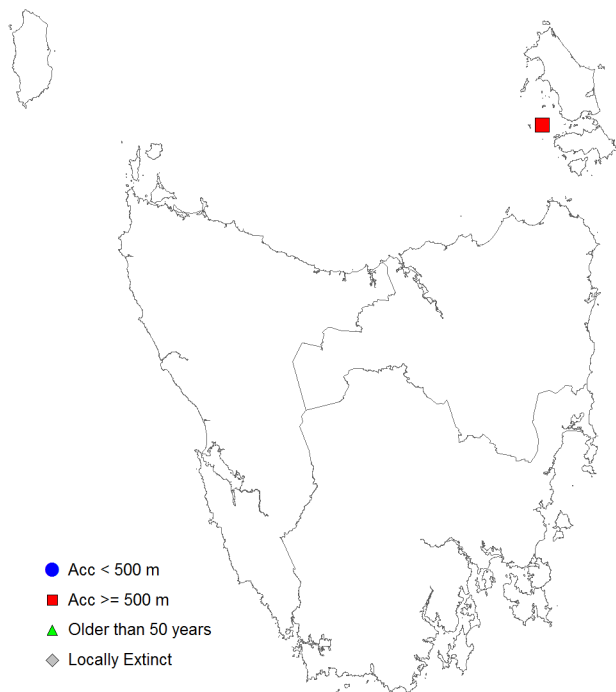


Figure 1. Distribution of *Ranunculus diminutus* in Tasmania, showing Natural Resource Management regions



Plate 1. Flowers and leaves of *Ranunculus diminutus* from Victoria (images by A J Brown © State of Victoria, Department of Economic Development, Jobs, Transport and Resources 2015. Victorian Resources Online www.depi.vic.gov.au/vro. Reproduced with permission.)

SUMMARY: *Ranunculus diminutus* (brackish buttercup) is a perennial herb that is known in Tasmania from only one collection made in 1975 from Badger Island in Bass Strait. The species grows on intermittently wet sites though surveys are required to determine whether the species still occurs in Tasmania.

IDENTIFICATION AND ECOLOGY

Ranunculus diminutus is a small prostrate perennial herb with that can reproduce vegetatively by means of its long stolons. The species can persist with grazing with Briggs (1994) noting that most occurrences are in regions of grassland subject to grazing. The only Tasmanian collection was made when in flower in October. Flowering on the Australian mainland mainly occurs from October to December.

With another 18 native species in the *Ranunculus* genus and 26 in the family Ranunculaceae (Baker & de Salas 2014), *Ranunculus diminutus* represents a relatively low proportion of its genetic lineage in Tasmania.

Survey techniques

Surveys for *Ranunculus diminutus* are best undertaken during its main flowering period, October to February, noting that its habitat may be intermittently inundated.

Description

Ranunculus diminutus is a small prostrate herb with long stolons, and flowering stems to 10 cm high (to 4 cm in Tasmania). The leaves occur in basal rosettes. They have 2 to 10 cm petioles (to 5 cm in Tasmania) and somewhat succulent trifoliate laminae 0.5 to 2 cm long and wide. Each leaf segment is hairless, at least on the upper surface, oblong to narrowly elliptic and may have up to 3 lobes. The flowering stems support up to 3 flowers consisting of 5 to 8 spreading, ovate to broadly elliptic, glabrous or sparsely pilose sepals that are 3 to 5 mm long, and 6 bright yellow, oblong to obovate petals that are 3 to 6.5 mm long. Each petal has a small, semicircular or crescent-shaped nectar lobe about 0.5 mm long towards its base. The Tasmanian collection has glabrous

leaves and sepals. The sparsely hairy receptacle supports 15 to 30 stamens and 6 to 30 pistils. The fruit have 6 to 22 achenes arranged in a globular head. The achenes are 1 to 1.8 mm long, flattened to obovoid, with smooth, finely wrinkled or obscurely ridged lateral faces and a slender, erect beak about 1 mm long.

[description based on Briggs 1994, Walsh 1996, Eichler et al. 2007 and Duretto 2009]

Confusing species

Ranunculus diminutus somewhat resembles the maritime *Ranunculus acaulis*, which has broader fleshier leaflets, and *Ranunculus collicola* which is smaller and has dull petals, fewer achenes and short recurved styles. It can be distinguished from small plants of *Ranunculus collinus* by its narrower leaves with fewer lobes and lack of prominent ridges on the achenes (Briggs 1994).

DISTRIBUTION AND HABITAT

Ranunculus diminutus occurs in Tasmania, Victoria, New South Wales and South Australia. In Tasmania the species has only been recorded once from Badger Island from the Furneaux Group of islands in Bass Strait at a locality described as 'North Lagoon'. On mainland Australia, the species grows in intermittently wet clay soils or muds which tend to be slightly to moderately saline.

POPULATION PARAMETERS

Ranunculus diminutus is known in Tasmania from only one collection made in 1975 from Badger Island. No population details were associated with the collection and it is not known whether the species is still extant on the island.

The species was described in 1994 (Briggs 1994) and was only included in the Tasmanian vascular plant census in 2004 following determination of the Badger Island collection as *Ranunculus diminutus* in 2002. However, the species may not be significantly more widespread in Tasmania given the significant botanical survey and collection effort on the Bass Strait islands and the wide identification

Table 1. Population summary for *Ranunculus diminutus* in Tasmania

	Subpopulation	Tenure	NRM Region	1:25000 Mapsheet	Year last (first) seen	Area occupied (ha)	Number of mature plants
1	'North Lagoon', Badger Island	Indigenous Protected Area	North	Badger	1975	unknown	unknown

NRM region = Natural Resource Management region

window of the species. While all terrestrial vascular plant records from Badger Island pre-date the description of *Ranunculus diminutus*, no other *Ranunculus* species have been recorded on the island.

RESERVATION STATUS

Ranunculus diminutus is known from the Badger Island Indigenous Protected Area, part of Australia's National Reserve System. It is classified as private land in Tasmania.

CONSERVATION ASSESSMENT

Ranunculus diminutus is in the process of being listed as endangered on schedules of the Tasmanian *Threatened Species Protection Act 1995*, meeting the following criteria:

(B) Extent of occurrence estimated to be less than 500 km² or occupancy less than 10 hectares, and:

1. severely fragmented or known to exist at no more than five locations;
2. continuing decline observed in the area, extent and/or quality of habitat.

(D) Total population extremely small or area of occupancy very restricted, and:

2. total population with an area of occupancy less than 1 hectare, and typically in five or fewer locations that provide an uncertain future due to the effects of human activities or stochastic events, and thus capable of becoming extinct within a very short time period.

THREATS, LIMITING FACTORS AND MANAGEMENT ISSUES

It is not known whether *Ranunculus diminutus* is still extant on Badger Island. The Chappell Island and Badger Island Indigenous Protected Area fact sheet (2007) notes that both islands

suffer from degradation and loss of native plant and animal species as a result of years of overgrazing and land clearing, the introduction of exotic plants and animals, and inappropriate burning regimes. Harris et al. (2001) also note that the vegetation of the island had become degraded following a long history of frequent burning, sheep grazing and settlement. These activities could have adversely impacted the wetland habitat of *Ranunculus diminutus*. The island was described in the early to mid-1800s as having numerous lakes, lagoons and small streams. However, Harris et al. (2001) note that small streams are now not evident on the island, suggesting an ongoing drying, possibly as a result of a changing climate augmented by deforestation and other past land use practices.

MANAGEMENT STRATEGY

Management objectives

If *Ranunculus diminutus* proves to be extant in Tasmania, the main objective for the recovery of the species would be to prevent the loss or degradation of known subpopulations, promote conditions for the species' successful recruitment and increase the number of known subpopulations through survey.

What has been done?

Actions specifically targeting *Ranunculus diminutus* have not been undertaken. Badger Island was declared an Indigenous Protected Area in 2002. Indigenous Protected Area funding is being used for revegetation and grazing, erosion and weed control activities on Badger Island.

What is needed?

Agencies, groups or individuals may assist with some or all of the following recovery actions. Coordinated efforts may achieve the best and most efficient results.

- liaise with the indigenous landowners to determine whether the species still occurs on Badger Island, and if so manage its habitat to alleviate threats and promote recruitment;
- provide information and extension support to relevant Natural Resource Management committees, local councils, government agencies, the local community and development proponents on the locality, significance and management of known subpopulations and potential habitat;
- conduct extension surveys of potential habitat radiating out from Badger Island or other known sites should the species be found to be extant in Tasmania;
- should the species prove to be extant in Tasmania, collect seed for long-term conservation storage at the Tasmanian Seed Conservation Centre based at the Royal Tasmanian Botanical Gardens.

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View:

www.dpipwe.tas.gov.au/threatenedspecieslists
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Permit: It is an offence to collect, disturb, damage or destroy this species unless under permit.