Myosurus australis

Illustration by Richard Hale

FAMILY: RANUNCULACEAE

BOTANICAL NAME: *Myosurus australis* F.Muell., *Trans. Philos. Soc. Victoria* 1: 6 (1854)

COMMON NAME: Southern mousetail

COMMONWEALTH STATUS (EPBC Act): Not Listed

TASMANIAN STATUS (TSP Act): endangered

Description

Myosurus australis is a short-lived annual herb with a rosette of rather fleshy narrow-linear leaves. The leaves are up to 10 cm long and have entire margins, and usually wither before fruit develops. Several simple flower stems arise from the base of the plant, each bearing a single flower; the stems are 1 to 3 cm long at flowering, elongating to up to 10 cm in fruit. The flowers are very small and greenish-yellow in colour; there are 5 sepals, each 3 to 5 mm long and with a basal spur, 0 to 5 minute petals and 5 to 10 stamens. The fruit consists of 100 to 300 small fruitlets (achenes) arranged along the top section of the flower stem in a dense slender spike up to 4 cm long. The achenes are dry, leathery and slightly flattened, with a short, erect beak (description from Curtis & Morris 1975, Walsh & Entwisle 1996). Flowering material has been collected in Tasmania in mid November; the species' flowering period in Victoria is cited as September to November (Walsh & Entwisle 1996).

[*Myosurus australis* was known previously as *Myosurus minimus* L. sensu Curtis & Morris (1975).]

Distribution and Habitat

Myosurus australis is endemic to Australia, occurring in all mainland States (Eichler et al. 2007). In Tasmania the species has been recorded at just two sites c. 55 km apart, one in the Southern Midlands and one in the Central Plateau, the altitude at the respective sites being 400 m and 925 m above sea level. Plants at the former site were found in November 1970 in pond near Jericho, while at the latter site they were found in January 2005 growing in a dolerite rock pavement amongst open forest of *Eucalyptus pauciflora* and *Eucalyptus dalrympleana* near Penstock Lagoon. The habitat at the Jericho site, where the species is now presumed extinct (Wapstra et al. 2006), is consistent with that described for Victoria by Walsh & Entwisle (1996): 'Occasional on drying mud around pools, lakes and billabongs'.

Curtis & Morris (1975) opined that the species may be '… possibly widespread and overlooked' in Tasmania, but also that it may be an introduction. The native status of plants at the site near Penstock Lagoon has also been questioned, a consequence of the species' growing in what had essentially been a 'sheep camp' and the presence of weeds such as *Navarretia squarrosa* (skunkweed), together being suggestive of an introduction, perhaps in stock-feed imported from mainland Australia.

Plate 1. *Myosurus australis*: flowering plant
(image by Hans Wapstra of plant grown on from seed collected near Penstock Lagoon)

Key Sites and Populations
Penstock Lagoon.

Known Reserves
This species is not currently known from any reserve.

Ecology and Management
Myosurus australis is an annual herb, and hence plant numbers from year to year may fluctuate considerably depending on conditions pre- and post-germination. Survival through unfavourable periods will depend upon the presence and persistence of a soil seed-bank. The species' ephemeral nature means that the risk of inadvertent destruction of its habitat is high, as environmental impact assessments may not be conducted at optimal times to identify its presence.

The marginal wetland habitat of *Myosurus australis* is likely to be impacted by any changes to local and broader hydrological processes, as well as by stock trampling, nutrient enrichment associated with stock and fertiliser application, and weed invasion.

Conservation Status Assessment
Myosurus australis was listed as presumed extinct on the original schedules of the Tasmanian *Threatened Species Protection Act 1995* (under the name *Myosurus*

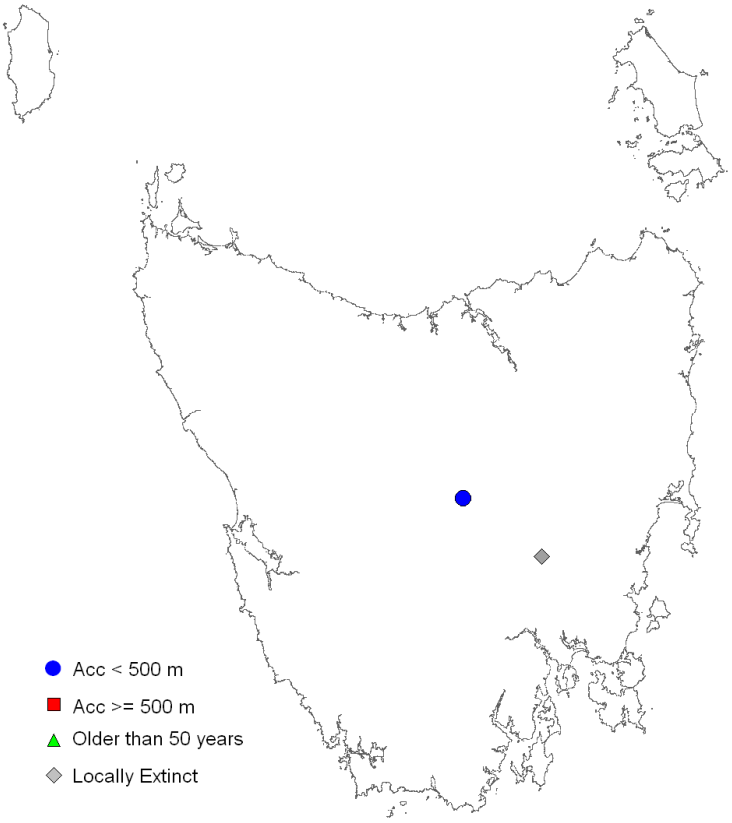
minimus), and amended to endangered in 2008 following the discovery of plants near Penstock Lagoon. Potential habitat for the species in Tasmania, including wetlands, grasslands and rock pavements, have been subject to intensive surveys over the past 30 years (eg, Kirkpatrick & Harwood 1981, Kirkpatrick et al. 1988, Gilfedder et al. 1997), so the lack of additional sites for such a distinctive (albeit diminutive) species is somewhat surprising, lending further support to the notion of it being a relatively recent introduction (Duretto 2009). Additional surveys radiating out from the two recorded sites are required to shed further light on the species' status.

Further Information

- Curtis, W.M. & Morris, D.I. (1975). *The Student's Flora of Tasmania, Part 1. (Second Edition).* Government Printer, Tasmania.
- Duretto, M.F. (2009). 47 Ranunculaceae, version 2009:1. In MF Duretto (Ed.) *Flora of Tasmania Online*. 30 pp. (Tasmanian Herbarium, Tasmanian Museum & Art Gallery: Hobart). ISBN 978-1-921599-07-1 (PDF). **www.tmag.tas.gov.au/floratasmania**
- Eichler, Hj, Jeanes, J.A. & Walsh, N.G. (2007). Ranunculaceae, *Flora of Australia* 2: 290–397.
- Gilfedder, L., Kirkpatrick, J.B. & Ziegler, D. (1997). *Characteristics and Conservation Status of Rock Pavement Vegetation in Lowland Perhumid and Subhumid Tasmania*. Unpublished report funded by the Commonwealth of Australia under the National Estate Grants Program. University of Tasmania, Hobart.
- Kirkpatrick, J.B. & Harwood, C.E. (1981). *The conservation of Tasmanian wetland macrophytic species and communities*. Tasmanian Conservation Trust Inc., Hobart.
- Kirkpatrick, J., Gilfedder, L. & Fensham, R. (1988). *City Parks and Cemeteries: Tasmania's Remnant Grasslands and Grassy Woodlands.* Tasmanian Conservation Trust Inc., Hobart.
- Walsh, N.G. & Entwisle, T.J. (1996). *Flora of Victoria: Volume 3: Dicotyledons Winteraceae to Myrtaceae.* Inkata Press, Melbourne.
- Wapstra, M., Fred Duncan, F., Buchanan, A. & Schahinger, R. (2006). Finding a Botanical Lazarus: Tales of Tasmanian Plant Species 'Risen From The Dead**.** *The Tasmanian Naturalist* 128: 61–85.

Tasmanian Distribution

(As per Threatened Species & Marine Section records, December 2013)



1:25 000 Map Sheets

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View

http://www.dpipwe.tas.gov.au/threatenedspecieslists

Contact details

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Permit

It is an offence to collect, disturb, damage or destroy this species unless under permit.