Image by Matthew Larcombe

Scaevola albida

pale fanflower

TASMANIAN THREATENED SPECIES LISTING STATEMENT

Scientific name: ***Scaevola albida*** (Sm.) Druce, *Rep. Bot. Exch. Club Brit. Isles* 1916, Suppl. 2: 644 (1917)

Common name: pale fanflower (Wapstra et al. 2005)

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

Status: *Threatened Species Protection Act 1995*: **vulnerable**

Environment Protection and Biodiversity Conservation Act 1999: **Not listed**

Distribution: Endemic status: **Not endemic to Tasmania**

Tasmanian NRM Region: **Cradle Coast & North**

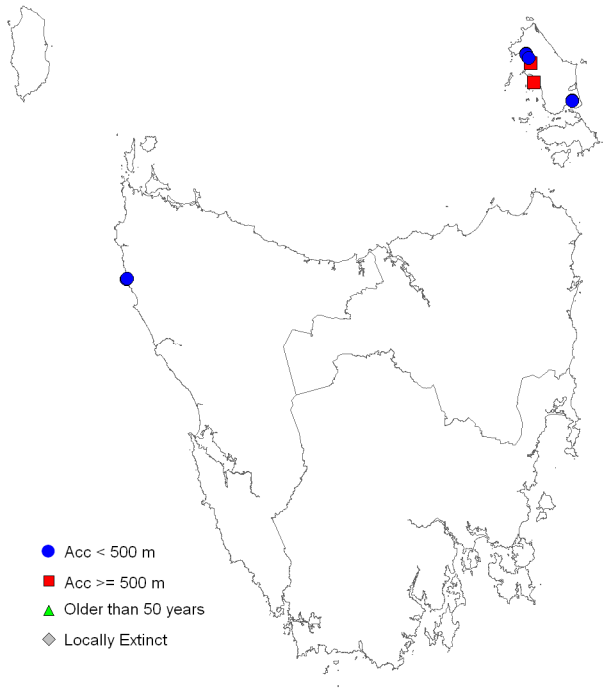

Figure 1. Distribution of *Scaevola albida* in Tasmania

Plate 1. *Scaevola albida*
(image by Matthew Larcombe)

IDENTIFICATION AND ECOLOGY

Scaevola albida is a cushion-forming herb that spreads vegetatively by root suckers. The species responds positively to disturbance, be it in the form of fire, slashing or physical disturbance. It is likely to have a long-lived soil-stored seedbank, a characteristic shared by the allied *Scaevola aemula* (Threatened Species Section 2008), thus allowing it to recolonise areas after long disturbance-free periods.

Survey techniques

Scaevola albida is most readily detected during its flowering season, November to January. Flowers are required for the identification of the species.

Description

Scaevola albida is a prostrate to ascending herb to 20 cm high, forming irregular clumps up to a metre in diameter. The leaves are sessile to shortly petiolate, obovate to elliptical, 7 to 14 mm long and 2.2 to 5 mm wide, with an acute apex. The leaf margins in the basal half are entire, and those in the upper half occasionally dentate. The upper leaf surfaces, margins and main vein on the undersurface are covered with scattered strigose hairs. The flowers are usually restricted to the ends of leafy spikes that are up to 7 cm long. They are solitary in the leaf axils and sessile, with a pair of narrow oblanceolate bracteoles 9 to 10 mm long. The corolla is 8 to 12 mm long, blue or white with a yellow or white throat, with appressed hairs on the outside and a sparse covering of hairs on the inside. The ovary is glabrous and unilocular with a single ovule. The style is 3 to 5 mm long, topped by an indusium (pollen cup surrounding the stigma) about 2 mm wide and glabrous on the back or with a few scattered hairs, and short white bristles around the triangular orifice. The fruit is ellipsoid, hairless and about 2.5 mm long and 1.5 mm wide.

[description based on Rozefelds 2001]

Confusing species

There are two other *Scaevola* taxa in Tasmania (Buchanan 2009). *Scaevola aemula* is a sprawling to erect herb with much larger leaves and flowers and a tuft of hairs on the back of the indusium. *Scaevola hookeri* is a mat-forming species that roots at the nodes. Its indusium has an elliptical orifice lacking conspicuous bristles found in the other 2 species (Rozefelds 2001).

DISTRIBUTION AND HABITAT

Scaevola albida occurs in New South Wales, Queensland, South Australia, Victoria and Tasmania (Walsh & Entwisle 1999). In Tasmania the species is known from a few sites on Flinders Island and a single site on the northwest coast near Temma (Figure 1, Table 1). In Tasmania, the species has a linear range of 300 km, an extent of occurrence of 3,200 km^2, (which includes large areas of sea), and an area of occupancy of about 5 ha.

The habitat of *Scaevola albida* includes near-coastal scrubs, woodlands and grasslands, usually on calcareous sands, and it has also been observed colonising road margins, consistent with the Victorian experience (Walsh & Entwisle 1999). The elevation of known sites is 10 to 30 m above sea level, and the annual rainfall is about 500 to 700 mm.

The potential habitat of *Scaevola albida* on Flinders Island is roughly delineated by areas of Quaternary sands with limestone deposits, in the Marshall Bay land system (Pinkard & Richley 1982). The analogous system in northwestern Tasmania is the Temma land system (Richley 1984).

Plate 2. *Scaevola albida* colonising road-side margins on Flinders Island (image by Matthew Larcombe)

Table 1. Population summary for *Scaevola albida* in Tasmania

	Subpopulation	Tenure	NRM Region	1:25000 mapsheet	Year last (first) seen	Area occupied (ha)	Number of mature plants
1	Possum Banks, Temma	Arthur-Pieman Conservation Area	Cradle Coast	Temma	2004 (2001)	1–2	150–200 (0 seen in 2010)
2	Lime Pit Road, Flinders Island	Lime Pit Road Conservation Area, private land	North	Loccota	2008 (1998)	0.1 (1–2)	300 (1000s)
3	Blue Rocks district, Flinders Island	private land?	North	Leventhorpe	1970	unknown	unknown
4	Palana Road, west side, c. 5 km north of Emita	private land	North	Emita	1966	unknown	unknown
5	Palana Road – Five Mile Road, Flinders Island	Crown land*, Flinders Island Council, private land	North	Palana	2010 (1981)	2–3	c. 10,000
6	Palana, Flinders Island	private land	North	Palana	2008	0.1	20

* = Crown component recommended to become a Public Reserve under the *Crown Lands Act 1966* with possible incorporation into the road reservation (CLAC Project Team 2006); NRM region = Natural Resource Management region.

The near-coastal grasslands that support the species at the Temma site are dominated by *Poa rodwayi* (velvet tussockgrass) and are a recognised facies of the vegetation community 'Lowland *Themeda triandra* grassland' (Harris & Kitchener 2005). They form part of the ecological community 'Lowland Native Grasslands of Tasmania' that is listed as Critically Endangered on the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

Scaevola albida co-occurs with a number of threatened flora species on Flinders Island, including *Eutaxia microphylla* var. *microphylla* (spiny bushpea), *Pimelea curviflora* var. *sericea* (silky curved rice-flower), *Pomaderris oraria* subsp. *oraria* (bassian dogwood), *Zygophyllum billardierei* (coast twin-leaf) and the nationally listed *Pterostylis cucullata* subsp. *cucullata* (leafy greenhood). Threatened flora at the Temma site include *Euphrasia collina* subsp. *tetragona* (northcoast eyebright), *Pterostylis cucullata* subsp. *cucullata* and *Vittadinia australasica* var. *oricola* (coast new-holland-daisy).

POPULATION ESTIMATE

In the order of 10,000 plants of *Scaevola albida* are known from the four Tasmanian subpopulations with available abundance information, with all but about 500 plants in one subpopulation. There is no abundance information for the other two recorded locations (Table 1).

Surveys on Flinders Island in November 2008 revealed the species to be more abundant than previously thought, with thousands of plants recorded along the margins of Palana Road and Five Mile Road, and the discovery of a new, albeit small, colony in undisturbed vegetation a few kilometres to the north (Schahinger 2009). There are extensive areas of unsurveyed habitat on Flinders Island behind Marshall Beach in the Emita/Tanner area and Blyth Bay in the Palana area, and it considered highly likely that additional sites will be located given a targeted survey effort.

The chances of additional sites being found in northwestern Tasmania is considered to be low given the past survey effort (Schahinger 2002 & 2005) and the observed decline at the single known site over the past decade. No plants were found at this location in November 2010.

RESERVATION STATUS

Scaevola albida has been recorded in Lime Pit Road Conservation Area and Arthur-Pieman Conservation Area.

CONSERVATION ASSESSMENT

Scaevola albida was listed as rare on the Tasmanian *Threatened Species Protection Act 1995* when the Act came into being. However, as only a small proportion of the total population is within formal reserves and the largest subpopulation remains at risk from vegetation clearance, weed invasion and inappropriate roadside management, the species was uplisted to vulnerable in October 2011, meeting criterion B for the vulnerable category:

Extent of occurrence estimated to be less than 2,000 km^2, area of occupancy less than 50 ha, and:

1. the species is known to exist at no more than 10 locations;

2c. a continuing decline is inferred in extent and quality of habitat.

THREATS, LIMITING FACTORS AND MANAGEMENT ISSUES

Threats to *Scaevola albida* include land clearance, dune destabilisation, weed invasion, inappropriate roadside maintenance, a lack of disturbance and stochastic events.

Land clearance: Habitat for the species on Flinders Island occurs primarily on private land, and in consequence it is at risk from vegetation clearance for agriculture or housing. An unknown number of plants have been lost to vegetation clearance in the past, with recent losses observed at sites 2 and 5 (Table 1) in the past 2 years.

Weed invasion: Plants along the margins of Palana Road on Flinders Island are at some risk from weed invasion, with species such as *Marrubium vulgare* (white horehound) and *Reseda* species (mignonette or weld) present in significant numbers in the immediate area. Allied threats include off-target damage during the application of herbicides to treat roadside weed infestations, and the physical scraping of roadside margins during maintenance activities.

Dune destabilisation: The species' coastal dune habitat near Temma is sensitive to physical disturbance, especially from off-road vehicles. There are a number of active blow-outs in the area. Recorded sites have already been enveloped by expanding blows.

Lack of disturbance: *Scaevola albida* is a species that responds positively to disturbance, be it in the form of fire or slashing (Lime Pit Road) or physical disturbance (Palana Road–Five Mile Road). The species has been recorded from areas previously dominated by shrubby *Eucalyptus ovata* woodland, indicating that the species is likely to have a relatively long-lived soil-stored seedbank. However, the prolonged absence of fire in areas supporting native vegetation may be detrimental to the species.

Stochastic events: The small size of some of the known sites exposes them to a high risk of extinction due to unforeseen events. No plants were found at the Temma site in November 2010, the species' apparent demise being attributed to a combination of drought and expanding sand-blows.

MANAGEMENT STRATEGY

What has been done?

- General surveys of the species' grassland habitat between the Pieman River and Studland Bay were undertaken in the period 2001–2004 (Schahinger 2002 & 2005).
- Known sites on Flinders Island were assessed in late 2008, along with extension surveys (Schahinger 2009), and the Temma site was assessed in November 2010 by Threatened Species Section personnel with the assistance of volunteers with the group Threatened Plants Tasmania.

Management objectives

The main objectives for the recovery of *Scaevola albida* are to maintain the viability of the existing subpopulations, promote conditions for the species' successful recruitment at known sites and, if possible, increase the number of subpopulations through survey.

What is needed?

- inform relevant land managers and stakeholders on Flinders Island including the Flinders Island Council, Parks and Wildlife Service and private landowners of the species' presence and its management requirements;
- encourage private landowners to consider protection and management of the species' habitat through perpetual covenants under the Tasmanian *Nature Conservation Act 2002*;
- survey potential habitat on private property in the Marshall Bay land system on Flinders Island to determine the species' presence and abundance;
- undertake an ecological burn of the Lime Pit Road Conservation Area sometime in the next five years, and post-fire surveys and monitoring to gauge the species' distribution and life history attributes;
- provide information and extension support to relevant Natural Resource Management Committees, local councils, government agencies, development proponents and the local community on the locality, significance and management of the known subpopulations and potential habitat.

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Prepared in November 2010 under the provisions of the Tasmanian *Threatened Species Protection Act 1995*. Approved by the Secretary and published in May 2011. Conservation status updated October 2011.

Cite as: Threatened Species Section (2011) *Listing Statement for* Scaevola albida *(pale*

fanflower), Department of Primary Industries, Parks, Water and Environment, Tasmania.

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