

# Threatened Species of the Northern Territory

## Lithomyrtus linariifolia

### Conservation status

Australia: Not listed

Northern Territory: Vulnerable



Photo: K. Brennan

### Description

*Lithomyrtus linariifolia* is usually a low spreading plant 10 – 20 cm tall, sprawling over sandstone boulders and rubble or rarely erect and up to 1 m tall. The leaves are arranged in opposite pairs and are 10-51 mm long by 1-3 mm wide and the stems are brown to orange-brown. The narrow leaves and mostly ground-hugging form are distinctive of this species. The flowers are pink with showy stamens and fruit are yellow-green or olive-green in colour.

Care should be taken in identification, as the erect form can be confused with narrow leaf extremes of *L. dunlopii*. Snow and Guymer (1999) noted the dense pubescence or hairiness on the lower surface of the leaf of *L. dunlopii* as diagnostic, but this can be difficult to see. *Lithomyrtus linariifolia* has generally longer and narrower flower stalks or peduncles (R. Kerrigan pers. obs.).

Flowering: Feb – Apr.

Fruiting: Apr – May.

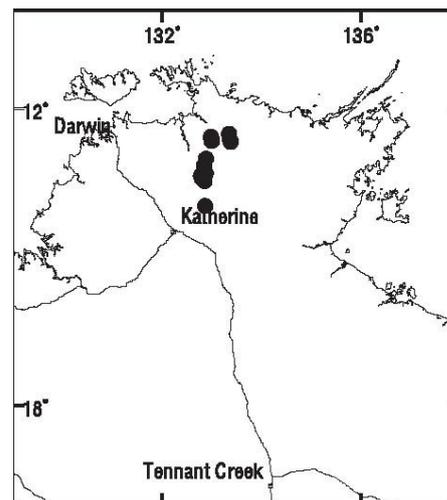


### Distribution

*Lithomyrtus linariifolia* is an NT endemic, known from approximately fourteen localities in Kakadu National Park and Arnhem Land.

*Conservation reserves where reported:*

Kakadu National Park, Nitmiluk National Park.



Known locations of *Lithomyrtus linariifolia*.

### Ecology

It is found in heaths or eucalypt woodlands on sandstone, in sandy or skeletal soils, often along the margins of *Allosyncarpia ternata* forest and almost always growing amongst *Triodia microstachya*. It is apparent from

recent survey that this species is fire sensitive, found only in unburnt and fire protected pockets amongst sandstone boulders and outcrops (A. Gibbons and I. Cowie, *pers. obs.*). It appears to be an obligate seeder with no individuals observed to resprout.

### Conservation assessment

Although the Arnhem Land and Kakadu escarpment is remote and difficult to access, this species is considered adequately surveyed as a relatively high proportion of herbarium collections come from the Arnhem Land/Kakadu area. At present 13,715 plant records are documented for the seven quarter degree grid cells where this species is known to occur.

This species was first collected in 1984 and type material was collected by Russell-Smith in 1991. Targeted surveys of this species in 2003 and 2004 (Kerrigan 2003, 2004), survey of sandstone heath communities as part of the Fire Plot programs in Nitmiluk National Park (Anon 2000) and Kakadu (Anon 2001), and comprehensive survey of Nitmiluk National Park during a vegetation mapping project offer confidence in the distribution data of this species.

*Lithomyrtus linariifolia* is now known from 14 localities, although some localities, which are close together, may represent the same population. The extent of occurrence and population size are estimated at 3411 km<sup>2</sup> and at least 200 mature individuals respectively (Kerrigan 2004).

This taxon was classified by Snow and Guymer (1999) as **Vulnerable** (under criterion D1), based on a small population size estimated at <1000 mature individuals.

### Threatening processes

At present, no imminent threats are identified. Russell-Smith *et al.* (1998, 2002) reported that in some cases current fire regimes are affecting obligate seeders in sandstone heath communities and inappropriate fire regimes are a potential threat to this species.

Unfortunately the generation time for this species has not been assessed and the potential for frequent fire events to kill individuals before reproductive maturity has not been evaluated. Similarly, seed bank stores, seed longevity and germination and establishment requirements are unknown. With such a small population size, the species is vulnerable to stochastic events and inappropriate fire regimes.

### Conservation objectives and management

Research into the status of the population and the role of fire in its distribution is required. Few species-specific surveys have been undertaken and further survey may yield more localities. A monitoring program for this species has been established (Kerrigan 2003, 2004).

### Compiled by

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### References

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