

Approved Conservation Advice for
***Beyeria lepidopetala* (Small-petalled Beyeria)**

(s266B of the *Environment Protection and Biodiversity Conservation Act 1999*)

This Conservation Advice has been developed based on the best available information at the time this Conservation Advice was approved; this includes existing plans, records or management prescriptions for this species.

Description

Beyeria lepidopetala, Family Euphorbiaceae, also known as Small-petalled Beyeria, is an erect, open shrub that ranges from 0.25–1.7 m in height and bears separate male and female flowers. The flowers are green and the flowering period is from July to August. The fruit is a three-chambered oval capsule which contains three seeds and is approximately 6 mm long.

Conservation Status

Small-petalled Beyeria is listed as **endangered**. This species is eligible for listing as endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act) as it occurs in two populations consisting of 220 mature individuals.

The species is also listed as Declared Rare Flora under the *Western Australian Wildlife Conservation Act 1950*.

Distribution and Habitat

Small-petalled Beyeria is known from three locations in the Kalbarri–Murchison area of Western Australia, approximately 600 km north of Perth.

The species has not been recorded from the first location in Kalbarri National Park after its discovery in 1994. Two further locations, in a private conservation reserve, were discovered in 2004, and the species has continued to be recorded in these two locations. The number of mature plants in these two locations in 2005 was 220.

Small-petalled Beyeria has been found growing in varied habitats such as yellow sandy clay in a gully in low heath, in turn situated in an area of open mallee woodland regenerating after fire, and low regenerating heath on a limestone ridge above a gully. The most northerly population grows in shallow sand over sandstone.

The flowering period for Small-petalled Beyeria is July to August. Little is known about the levels of flower and fruit production of this species. However, its floral structure suggests that it is insect pollinated. There are no data on seed viability.

While fire and changed fire regimes are considered a potential threat to Small-petalled Beyeria, it is likely that occasional fires are needed for recruitment, as this species regenerates after fire. The species is suspected to be a relatively short-lived disturbance opportunist, appearing after a fire and then declining in number over the next few years. *Beyeria* plant species as a group are characteristically fire/disturbance responsive and decline in the absence of suitable disturbance.

Small-petalled Beyeria occurs within the Northern Agricultural Natural Resource Management Region.

The distribution of this species is not known to overlap with any EPBC Act-listed threatened ecological communities.

Threats

The main potential threats to Small-petalled *Beyeria* are track and firebreak maintenance and inappropriate fire regimes.

As the Small-petalled *Beyeria* occurs on tracks and firebreaks, it is potentially vulnerable to accidental damage from maintenance activities such as grading and widening. This maintenance will impact on the species, however the level of impact is being managed through a Western Australian government process, with approval and a permit required to “take” (damage or destroy) Declared Rare Flora.

Inappropriate fire regimes may potentially threaten the species, as seeds of Small-petalled *Beyeria* probably germinate following fire. Under an inappropriate fire regime, the soil seed bank is likely to be depleted by recurrent fires before regenerating plants have reached maturity and have replenished the soil seed bank. However, occasional fires are almost certainly needed for recruitment of this species.

Research Priorities

Research priorities that would inform future regional and local priority actions include:

- Monitor known populations.
- Identify appropriate fire or other disturbance regimes for Small-petalled *Beyeria*.

Regional Priority Actions

The following regional priority recovery and threat abatement actions can be done to support the recovery of Small-petalled *Beyeria*.

Habitat Loss, Disturbance and Modification

- Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary.
- Ensure road and firebreak maintenance activities in areas where Small-petalled *Beyeria* occurs do not adversely impact on known populations.

Fire

- Develop and implement a suitable fire management strategy for Small-petalled *Beyeria*.

This list does not necessarily encompass all actions that may be of benefit to Small-petalled *Beyeria*, but highlights those that are considered to be of highest priority at the time of preparing the conservation advice.

Information Sources:

Brown A, Marchant N and Thomson-Dans C (1998). Western Australia's Threatened Flora. Western Australian Department of Conservation and Land Management.

CALM (2006a). Records held in CALM's Declared Flora Database and rare flora files. Western Australian Department of Conservation and Land Management.

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Mueller F (1859). *Fragmenta Phytographiae Australiae* 1: 230

Patrick S (2001). Declared Rare and Poorly Known Flora in the Geraldton District. Wildlife Management Program No. 26. Western Australian Department of Conservation and Land Management.

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