

# THREATENED SPECIES SCIENTIFIC COMMITTEE

Established under the *Environment Protection and Biodiversity Conservation Act 1999*

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The Minister's delegate approved this conservation advice on 01/10/2015

## Conservation Advice

### *Drummondita ericoides*

Morseby Range drummondita

#### Conservation Status

*Drummondita ericoides* (Morseby Range drummondita) is listed as Endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act). The species is eligible for listing as Endangered as, prior to the commencement of the EPBC Act, it was listed as Endangered under Schedule 1 of the *Endangered Species Protection Act 1992* (Cwlth).

The main factors that are the cause of the species being eligible for listing in the Endangered category are its low total number of mature individuals (less than 2500) and the precariousness of its survival (known to exist at a limited location and at risk of future decline).

Morseby Range drummondita is also listed as vulnerable under the *Wildlife Conservation Act 1950* (Western Australia). The Western Australia Government identifies that the species is eligible for listing in the vulnerable category under IUCN criteria D1 (less than 1000 mature individuals) and D2 (less than 20 km<sup>2</sup> area of occupancy) (DPAW 2014).

#### Description

Morseby Range drummondita is a shrub that grows to 20 cm tall on ridges and 1 m tall in sheltered gullies (Stack et al., 2004). It has yellow-white solitary flowers on that occur on the end of branchlets (Stack et al., 2004). Within the flower are 10 stamens (pollen producing columns) that are united into a narrow hairy tube, which is white to violet and protrudes beyond the petals (Stack et al., 2004). Flowering occurs in August to October (Stack et al., 2004).

#### Distribution

Morseby Range drummondita is restricted to the sandstone and laterite slopes of Moresby Range, north of Geraldton over a linear range of 20 km (Stack et al., 2004). Five subpopulations are known with a total abundance of approximately 580 plants (Stack et al., 2004). Subpopulations occur in nature reserves and on private property (Stack et al., 2004). Nature reserves where the species occurs are Wokatherra Nature Reserve and Unnamed WA51376 Conservation Park (GHD 2010).

Morseby Range drummondita grows in low heathland on sandstone and laterite slopes, ridges and gullies of the Moresby Range, in brown loam or sandy loam and clay soils (Stack et al., 2004). It is associated with *Melaleuca megacephala*, *M. cardiophylla*, *Acacia blakelyi*, *Hakea pycnoneura* and prickly poison-bush (*Gastrolobium spinosum*) (Stack et al., 2004).

#### Threats

Morseby Range drummondita is threatened by inappropriate fire regimes. Too frequent fire would cause localised extinction (Stack et al., 2004) and such declines have been observed (Leigh et al., 1984). A minimum fire interval has not been defined, but would need to be sufficient for soil-stored seed to accumulate and for rootstock to become healthy following fire (Stack et al., 2004). The species does not require fire for germination (Stack et al., 2004).

The species is potentially threatened by risks associated with inappropriate access to the nature reserves. Inappropriate access may cause arson, weed invasion, rubbish dumping, trampling and vehicular damage (Stack et al., 2004); however, there is no evidence of this occurring currently.

## **Conservation and Management Actions**

### Fire

- Develop and implement a fire management strategy. The species is at risk of localised extinction caused by too frequent fire. Fire prevention, except when used as a recovery tool, has been recommended (Stack et al., 2004).
- Identify optimal fire regimes that limit the risk of localised extinction following fire. Liaise with land managers to determine appropriate fire control measures and to identify appropriate burning frequency, seasonality and intensity (when fire is necessary) (Stack et al., 2004).
- Provide maps of known occurrences to local and state fire teams and seek inclusion of mitigation measures in bush fire risk management plan/s, risk register and/or operation maps.
- If deemed necessary for recovery, fire trials should only be undertaken as a last resort when all other means of regeneration of the species has been investigated and, in addition, all weed management and fire impacts including the timing of fire impacts are fully understood.

### Habitat loss disturbance and modifications

- Seek long term protection of habitat on private land (Stack et al., 2004).
- Revegetate land adjacent to known subpopulations that has been cleared for agriculture (Stack et al., 2004). This activity would act as a buffer to subpopulations and reduce edge effects (Stack et al., 2004).
- Control access by installing gates to suitably restrict vehicles on public land and manage access on private land and other land tenure.

### Stakeholder Management

- Ensure land managers are aware of the species' occurrence and provide protection measures against key and potential threats.
- Promote awareness of the species in the local community.

## **Survey and Monitoring priorities**

- Design and implement a monitoring program or, if appropriate, support and enhance existing programs. Annual monitoring has been recommended measuring habitat quality, abundance, pollinator activity, seed production, recruitment, subpopulation health and impacts of browsing (Stack et al., 2004).

## **Information and research priorities**

- Undertake survey work in suitable habitat and potential habitat to locate any additional subpopulations.
- Map subpopulations and critical habitat (Stack et al., 2004).
- The following research priorities into the species' ecological requirements have been recommended: soil seed bank dynamics; the role of competition, rainfall and grazing; pollination biology; requirements of pollinators; reproductive strategies; and population genetic structure (Stack et al., 2004).
- Undertake seed germination and/or vegetative propagation trials to determine the requirements for successful establishment. Collect seed for use in translocation and as a resource for genetic studies (Stack et al., 2004). Relevant policies should be referred to for guidance for undertaking translocations (e.g. CALM 1995; Vallee et al., 2004).

## References cited in the advice

- CALM (Department of Conservation and Land Management) (1995). Translocation of Threatened Flora and Fauna. Policy Statement No. 29. Government of Western Australia.
- DPAW (Department of Parks and Wildlife) (2014). Threatened Flora Rankings Current 2 December 2014. Government of Western Australia.
- GHD (2010). Shire of Chapman Valley Local Planning Scheme No. 2 Environmental Review.
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- Stack G, Chant A and English V (2004). Morseby Range Drummondita (*Drummondita ericoides*) Interim Recovery Plan (168) 2004-2009. Interim Recovery Plan No. 168. Department of Conservation and Land Management, Western Australian Threatened Species and Conservation Unit.
- Vallee L, Hogbin T, Monks L, Makinson B, Matthes B and Rossetto M (2004). Guidelines for the translocation of threatened plants in Australia - Second Edition. Canberra, ACT: Australian Network for Plant Conservation.