

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

**Approved Conservation Advice for**  
***Haloragis platycarpa* (Broad-fruited Haloragis)**

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**

*Haloragis platycarpa*, Family Haloragaceae, also known as Broad-fruited Haloragis, is a short-lived, many branched herb growing to 30 cm tall. Leaves are up to 45 mm long, alternate, stalkless, and lanceolate with several large teeth towards the apex. Groups of 1–3 flowers are held in the upper axils, but only the central flower is functional. Each flower has four petals up to 2 mm long, 8 stamens, and 4 styles. A single fruit develops in each axil and is up to 2.5 mm long with a swollen, spongy covering. It has 4 compartments, 4 weak ribs and is densely covered with minute, rounded projections (Brown et al., 1998; CALM, 2005).

**Conservation Status**

Broad-fruited Haloragis is listed as **critically endangered**. This species is eligible for listing as critically endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act) as, in 2006, the Minister considered the Threatened Species Scientific Committee's (TSSC) advised under section 189 of the EPBC Act and amended the list under section 184 to include Broad-fruited Haloragis. The TSSC determined that this species met Criteria 2 and 4 of their eligibility criteria (TSSC, 2006b). This species was previously listed as extinct under the EPBC Act in July 2000. The Broad-fruited Haloragis is also listed as rare under the *Wildlife Conservation Act 1950* (Western Australia).

**Distribution and Habitat**

Broad-fruited Haloragis is endemic to Western Australia and known from a single population rediscovered in 2000, near Dalwallinu, 220 km north-east of Perth. Both its total extent of occurrence and its total area of occupancy are approximately 0.6 km<sup>2</sup> (CALM, 2005). The species is found in flat areas in low woodland growing in brown loam soils in association with *Acacia acuminata*, *Grevillea levis*, *Pimelea avonensis* and numerous native and introduced grasses (CALM, 2005; WA Herbarium, 2005). The Pinnate-leaf Eremophila (*Eremophila pinnatifida*), listed as critically endangered under the EPBC Act, occurs on the same land parcel as the only known population of Broad-fruited Haloragis.

The total population of Broad-fruited Haloragis was estimated at 20–30 individual plants in 2000; a subsequent survey in 2001 found 30 dead plants, and further surveys failed to find any living specimens. Broad-fruited Haloragis is probably an annual which reappears in winter/spring from soil-stored seed; its apparent life cycle makes it difficult to predict trends with only a few years' survey data (CALM, 2005). This species occurs within the Avon (Western Australia) 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 threats to Broad-fruited Haloragis have not been identified owing to its rarity. The local shire, which manages the land on which the population occurs, has been notified and

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advised of its state legislative responsibility to prevent clearing and other human physical disturbances to the species (CALM, 2005).

The main potential threats to Broad-fruited Haloragis include severe weed invasion; lack of winter rain; soil disturbance; fire; and disturbance from heavy rain (CALM, 2005; TSSC, 2006a). No recruitment occurs after winter drought (CALM, 2005). The area in which this species was found had not been burnt for an extended period of time and it is not known whether fire would destroy the population or stimulate seed germination (CALM, 2005).

### **Research Priorities**

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

- Design and implement a monitoring program or, if appropriate, support and enhance existing programs.
- More precisely assess population size, distribution, biological characteristics, ecological requirements and the relative impacts of threatening processes (TSSC, 2006a).
- Undertake survey work in suitable habitat and potential habitat to locate any additional populations/occurrences/remnants (TSSC, 2006a).
- Undertake seed germination and/or vegetative propagation trials to determine the requirements for successful establishment.

### **Regional and Local Priority Actions**

The following priority recovery and threat abatement actions can be done to support the recovery of Broad-fruited Haloragis.

#### **Habitat Loss, Disturbance and Modification**

- Monitor the known population to identify key threats.
- Monitor the effectiveness of management actions and the need to adapt them if necessary.
- Control access routes to suitably constrain public access to the known site on public land.
- Minimise adverse impacts from land use at the known site.
- Manage threats to the area of vegetation that contains the known population of Broad-fruited Haloragis.
- Ensure chemicals or other mechanisms used to eradicate weeds do not have a significant adverse impact on Broad-fruited Haloragis.
- Ensure road widening, maintenance activities or development activities involving substrate or vegetation disturbance in areas where Broad-fruited Haloragis occurs do not adversely impact on known populations.
- Manage any changes to hydrology that may result in changes to the water table levels, increased run-off, sedimentation or pollution.
- Investigate formal conservation arrangements, management agreements and covenants if additional populations are located on private land, and for crown land and private land investigate inclusion in reserve tenure if possible.

#### **Invasive Weeds**

- Develop and implement a management plan for the control of invasive weeds in the local region (TSSC, 2006a).
- Identify, remove, and prevent introduction of weeds in the local area, which could become a threat to Broad-fruited Haloragis, using appropriate methods.

#### **Fire**

- Identify appropriate intensity and interval of fire to promote seed germination and/or vegetation regeneration.
- Implement an appropriate fire management regime for the population.

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- Provide maps of known occurrences to local and state rural fire services and seek inclusion of mitigative measures in bush fire risk management plans, risk register and/or operation maps.

#### Conservation Information

- Raise awareness of Broad-fruited Haloragis within the local community.

#### Enable Recovery of Additional Sites and/or Populations

- Undertake appropriate seed collection and storage (TSSC, 2006a).
- Investigate options for linking, enhancing or establishing additional populations.
- Implement national translocation protocols (Vallee et al., 2004) if establishing additional populations is considered necessary and feasible.

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

#### **Existing Plans/Management Prescriptions that are Relevant to the Species**

- An interim recovery plan has been prepared for the Pinnate-leaf Eremophila *Eremophila pinnatifida* (Stack & Brown, 2002) and recovery actions for this species may also assist in the recovery of Broad-fruited Haloragis (CALM, 2005).

This prescription was current at the time of publishing; please refer to the relevant agency's website for any updated versions.

#### **Information Sources:**

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

Department of Conservation and Land Management (CALM) 2005, Records held in CALM's Declared Flora Database and rare flora files. Western Australian Department of Conservation and Land Management.

Stack, G & Brown, A 2002, *Pinnate-leaved Eremophila* (*Eremophila pinnatifida* ms) *Interim Recovery Plan 2002–2007*. Western Australian Department of Conservation and Land Management.

Threatened Species Scientific Committee (TSSC) 2006a, *Commonwealth Conservation Advice on Haloragis platycarpa*, Department of Environment, Water, Heritage, and the Arts, viewed 22 April 2008, <<http://www.environment.gov.au/biodiversity/threatened/species/pubs/haloragis-platycarpa-conservation.pdf>>

Threatened Species Scientific Committee (TSSC) 2006b, *Commonwealth Listing Advice on Haloragis platycarpa*, Department of Environment, Water, Heritage, and the Arts, viewed 22 April 2008, <<http://www.environment.gov.au/biodiversity/threatened/species/pubs/haloragis-platycarpa-listing.pdf>>

Vallee, L, Hogbin, T, Monks, L, Makinson, B, Matthes, M & Rossetto, M 2004, *Guidelines for the Translocation of Threatened Plants in Australia - Second Edition*, Australian Network for Plant Conservation, Canberra.

Western Australian Herbarium 2005, Florabase. The Western Australian Flora. Department of Conservation and Land Management, viewed on 22 April 2008 <<http://florabase.calm.wa.gov.au/>>