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

Approved Conservation Advice for *Homoranthus montanus*

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

Homoranthus montanus, Family Myrtaceae, also known as Mountain Mouse Bush, is an erect shrub growing 1.5–3 m tall with narrow leaves 7–20 mm long and 1 mm wide. It has 1–6 small tubular flowers, each with a style longer than the green sepals, on undifferentiated branchlets (Craven & Jones, 1991). As flowers age the floral parts change colour from cream-white to pale shades of red (Halford, 1995). Flowering occurs from August to December (Craven & Jones, 1991), but has also been recorded in March, June and July (Halford, 1995). The species is probably an obligate seeder and is not capable of regenerating from rootstock or stem base (Halford, 1995).

Conservation Status

Homoranthus montanus is listed as **vulnerable**. This species is eligible for listing as vulnerable under the *Environment Protection and Biodiversity Conservation Act 1999* (Cwlth) (EPBC Act) as, prior to the commencement of the EPBC Act, it was listed as vulnerable under Schedule 1 of the *Endangered Species Protection Act 1992* (Cwlth). *Homoranthus montanus* is also listed as vulnerable under the *Nature Conservation Act 1992* (Queensland).

Distribution and Habitat

Homoranthus montanus was described from the vicinity of Ballandean in the Stanthorpe district of southern Queensland (Craven & Jones, 1991) and occurs in two areas separated by 20 km. The species is protected in Sundown National Park (Halford, 1995). Other recorded locations include a number of properties on Stalling Lane and Fletcher Road, Ballandean and Jibbinbar Mountain, where it occurs on both freehold land and in Sundown National Park (Halford, 1995; Donatiu, 2006; 3DEnvironmental, 2007; Queensland Herbarium, 2008). This species occurs within the Border Rivers Maranoa–Balonne (Queensland) Natural Resource Management Region.

Homoranthus montanus is known to grow in shallow, well drained soil in crevices on rock pavements on north-east and easterly slopes of granite hillsides at an altitude of 750–850 m above sea level (Craven & Jones, 1991; Donatiu, 2006). It grows in open forest dominated by Gum-topped Peppermint (*Eucalyptus andrewsii*) to woodland and heathland dominated by Black Cypress (*Callitris endlicheri*), Orange Gum (*E. prava*), Tumble-down Red Gum (*E. dealbata*) and Caley's Ironbark (*E. caleyi* subsp. *caleyi*). The shrub and ground layers in these communities are diverse; frequent species include *Boronia anethifolia*, *Bossiaea rhombifolia*, Fringe Myrtle (*Calytrix tetragona*), Cough Bush (*Cassinia laevis*), Thread-Leaf Hop Bush (*Dodonaea falcata*), Mountain Beauty (*Hovea pannosa*), *Leptospermum microcarpum*, New England Tea-tree (*L. novae-angliae*), *Leucopogon melaleucoides* and *Melichrus urceolatus* (Halford, 1995).

A total population of over 4000 individuals was estimated to be present in 1994. The population at Stalling Lane had a patchy distribution over an area of 5.3 ha and included over 2000 individuals. At Jibbinbar Mountain the population covered an area of 4.8 ha and included 2000 individuals (Halford, 1995). Herbarium records of *H. montanus* from Fletcher

Road were not located during the baseline surveys in 2006 and 2007 for the proposed Emu Swamp Dam, despite targeted searches (3DEnvironmental, 2007). The roadside habitat was heavily disturbed and had been subject to fire several months before the survey. The species was not recorded on Stalling Lane during the same surveys, although verified collections have been made on rocky hill slopes to the north (3DEnvironmental, 2007).

This species is not known to occur in any EPBC Act-listed threatened ecological communities.

Threats

The main identified threats to *H. montanus* include land clearing and altered fire regimes (Halford, 1995; Donatiu, 2006).

The main potential threats to the species include grazing, invasive weeds, small population size (Donatiu, 2006) and clearing of habitat and removal of specimens for development.

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, ecological requirements and the relative impacts of threatening processes.
- Undertake survey work in suitable habitat and potential habitat to locate any additional populations/occurrences/remnants.
- Determine the species' seed biology (Donatiu, 2006), including verifying if it is an obligate seeder as suggested by Halford (1995), as fruit have yet to be observed (Donatiu, 2006).
- Assess maturation times in order to confirm recommended fire intervals (Donatiu, 2006).
- Undertake seed germination 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 *Homoranthus montanus*.

Habitat Loss, Disturbance and Modification

- Monitor known populations to identify key threats.
- Monitor the progress of recovery, including the effectiveness of management actions and the need to adapt them if necessary.
- Identify populations of high conservation priority.
- Ensure road widening and maintenance activities (or other infrastructure or development activities) involving substrate or vegetation disturbance in areas where *H. montanus* occurs do not adversely impact on known populations.
- Control access routes to suitably constrain public access to known sites on public land.
- Suitably control and manage access on private land.

Invasive Weeds

- Identify and remove weeds in the local area, which could become a threat to *H. montanus*, using appropriate methods.
- Manage sites to prevent introduction of invasive weeds, which could become a threat to *H. montanus*, using appropriate methods.

- Ensure chemicals or other mechanisms used to eradicate weeds do not have a significant adverse impact on the *Homoranthus montanus.*

Trampling, Browsing or Grazing

- Develop and implement a stock management plan for roadside verges and travelling stock routes.
- Manage known sites to ensure appropriate stock grazing regimes occur.
- Prevent grazing pressure at known sites on leased crown land through exclusion fencing or other barriers.

Fire

- Develop and implement a suitable fire management strategy for *Homoranthus montanus.*
- Identify appropriate intensity and interval of fire to promote seed germination. A fire interval of 7–12 years is recommended (Donatiu, 2006).
- 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 registers and/or operation maps.

Conservation Information

- Raise awareness of *H. montanus* within the local community. A guide to rare and threatened species in the Granitebelt has been published, which outlines how interested members of the public can assist in wildflower protection (Rare Wildflower Consortium, 2007).

Enable Recovery of Additional Sites and/or Populations

- Undertake appropriate seed collection and storage.
- 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 *H. montanus*, 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

- Draft Stanthorpe Plateau Threatened Flora Recovery Plan 2007–2011 (Donatiu, 2006).

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

Information Sources:

Craven, LA & Jones, SR 1991, 'A Taxonomic Review of *Homoranthus* and Two New Species of *Darwinia* (both Myrtaceae, Chamelaucieae)', *Australian Systematic Botany*, vol 4, pp. 513–533.

Donatiu, P 2006, *Draft Stanthorpe Plateau Threatened Flora Recovery Plan 2007–2011*, prepared for the Stanthorpe Plateau Threatened Flora Recovery Team and the Queensland Murray-Darling Committee, Queensland Murray-Darling Committee, Toowoomba.

Halford, D 1995, Homoranthus montanus *Craven & Jones (Myrtaceae): A Conservation Statement*, Queensland Herbarium, Brisbane.

Queensland Herbarium 2008, *HERBRECS*, Queensland Herbarium, Brisbane.

Rare Wildflower Consortium 2007, *Wildflowers of the Granite Belt*, Rare Wildflower Consortium, Stanthorpe.

3DEnvironmental 2007, *Terrestrial Flora Baseline Study, Emu Swamp Dam Project, Severn River, Queensland*, report prepared for Sinclair Knight Mertz and Stanthorpe Shire Council, viewed 23 May 2008, <http://www.stanthorpe.qld.gov.au/eis/>.

Vallee, L, Hogbin, T, Monks, L, Makinson, B, Matthes, M & Rossetto, M 2004, *Guidelines for the Translocation of Threatened Plants in Australia* (2nd ed.), Australian Network for Plant Conservation, Canberra.