

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

Approved Conservation Advice for
***Macropus robustus isabellinus* (Barrow Island Euro)**

This Conservation Advice has been developed based on the best available information at the time this conservation advice was approved.

Description

Macropus robustus isabellinus, Family Macropodidae, also known as the Barrow Island Euro, is a stocky, dark-backed wallaroo with a paler belly (Van Dyck & Strahan, 2008). This species has a long-haired coarse coat and a distinctive upright hopping style.

Macropus robustus isabellinus has a stunted appearance and is much smaller and stockier than other subspecies.

Macropus robustus isabellinus is distinguished from *M. r. erubescens*, *M. r. robustus*, and *M. r. woodwardii* by its geographic isolation and its relatively stunted appearance. The average weight of Euros (*M. r. erubescens*) of the Pilbara is 35 kg for males and 16 kg for females, while the Barrow Island Euros average 20 kg and 8 kg, respectively (Short & Turner, 1991). A recent update to the Checklist of mammals of Western Australia does not recognise *Macropus robustus isabellinus* as a subspecies (How et al., 2008; B. Humphreys, 2008, pers. comm.).

Conservation Status

The Barrow Island Euro 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). This subspecies is also listed as rare or likely to become extinct under the *Wildlife Conservation Act 1950* (Western Australia).

Distribution and Habitat

The Barrow Island Euro is known only from Barrow Island, off the Pilbara coast of Western Australia, to the west of Karratha, within the Rangelands (Western Australia) Natural Resource Management Region. It occurs on the island at densities of 8 individuals per km² with an estimated population of 1800 (Short & Turner, 1991). Its total area of occupancy and extent of occurrence is 236 km². There is no information on trends in population size.

The Barrow Island Euro is most common in the deeply dissected area in the central west of the island, along coastal fringes where the low cliffs provide shade, and in flood-out flats where grasses other than *Triodia* dominate (Short & Turner, 1991). The Barrow Island Euro was found to favour areas that had been recently burnt. It is likely to eat mainly *Triodia* sp. as well as other grasses, herbs and forbs (Short & Turner, 1991).

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

Threats

The main identified threats to the Barrow Island Euro include road fatalities; fire; habitat degradation associated with development of petroleum infrastructure on Barrow Island; inbreeding depression; accidental feral animal release; and stochastic events leading to the extinction of small isolated populations (Butler, 1987; Wildlife Australia, 1996).

Research Priorities

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

- Clarify taxonomic status.
- Develop and implement an integrated management plan for all EPBC Act listed species on Barrow Island.
- Design and implement a monitoring program: Continue with long term spotlight monitoring transects for the Barrow Island Euro and analyse data.
- Investigate the fire ecology of the subspecies and develop optimal fire regime recommendations.
- Determine extent of nutritional stress among population.
- Determine if oil field and gas field management (and other development) can be modified to improve the condition of the Barrow Island Euro population.

Regional and Local Priority Actions

Barrow Island supports a number of EPBC Act listed species and therefore it is desirable to develop integrated recovery actions across all species. The following regional priority recovery and threat abatement actions can be done to support the recovery of the Barrow Island Euro.

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.
- Manage the island to prevent introduction of exotic animals, which could become a threat to the Barrow Island Euro or its habitat, using appropriate methods.
- Monitor and improve driver education and traffic management to reduce road fatalities.
- Ensure chemicals or other mechanisms used to eradicate weeds do not have a significant adverse impact on the Barrow Island Euro.
- Ensure maintenance and building activities associated with the oilfield (or any other infrastructure or development activities) in areas where the Barrow Island Euro occurs do not impact on known populations.
- Manage any changes to hydrology which may result in changes to the water table levels, increased run-off, sedimentation or pollution.
- Minimise adverse impacts from land use at known sites.
- Rehabilitate land impacted by the oilfield after decommissioning.

Fire

- Develop and implement a suitable fire management strategy for the Barrow Island Euro.

Establishing Additional Populations

- Investigate options for linking, enhancing or establishing additional populations.

Conservation Information

- Raise awareness of the Barrow Island Euro within the local community and the oil industry.

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

This conservation advice has been approved by the Minister/Delegate of the Minister on 3 July 2008

Existing Plans/Management Prescriptions that are Relevant to the Species

- Action Plan for Australian Marsupials and Monotremes (Wildlife Australia, 1996).

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

Information Sources:

Butler, WH 1987, 'Management of disturbance in an arid remnant: the Barrow Island Experience', In: Saunder, DA, Arnold, GW, Burbidge, AA & Hopkins, AJM (Eds.), *Nature Conservation: The Role of Remnants of Native Vegetation*, Pp. 279-285, Chipping Norton, Surrey Beatty.

How, RA, Cooper, NK & Bannister, JL 2008, *Checklist of the Mammal of Western Australia*, updated 28 February 2008, Department of Terrestrial Ecology, Western Australia Museum, viewed 2 May 2008, <<http://www.museum.wa.gov.au/collections/natscience/vertebrates/VertebrateChecklist.asp>>.

Humphreys, B, (Western Australia Museum). Personal Communication. 30 April 2008.

Short, J & Turner, B 1991, 'Distribution and abundance of Spectacled Hare-wallabies and Euros on Barrow Island, Western Australia', *Wildlife Research*, vol. 18, pp. 421-429.

Van Dyck, S & Strahan, R 2008, *The Mammals of Australia, Third Edition*, Reed New Holland, Sydney.

Wildlife Australia 1996, *Action Plan for Australian Marsupials and Monotremes*, Department of Environment and Heritage, viewed 2 May 2008, <<http://www.environment.gov.au/biodiversity/threatened/publications/action/marsupials/index.html>>.