Purple-necked rock-wallaby *Petrogale purpureicollis*


Photo by Rod Fensham

Vulnerable (*Nature Conservation Act 1992*) | Ecological Sciences, Queensland Herbarium

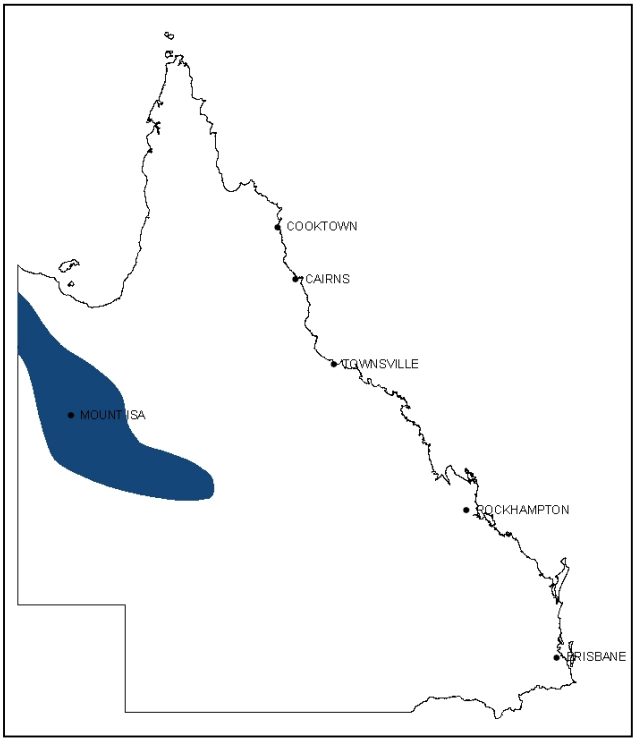
Identification

Body is light brown in colour, paler on the underside. It has a distinctive purple-mauve colouration over neck, face, head, and sometimes the upper chest and shoulders. The intensity of colouration differs between individuals, as well as seasons, from a light pink wash to a rich red-purple, and is usually most vivid on the cheeks, around the eyes and at the base of the ears. Dark brown dorsal stripe extends from eyes to between ears, along the midline. Tail is paler than body colour and dark towards tip. Feet pale brown, dark brown on toes (Menkhorst and Knight 2001; Johnson and Eldridge 2008).

Distribution

Petrogale purpureicollis is largely endemic to the North-west Highlands bioregion in Queensland, where it is more common in the Mt Isa and Dajarra areas, as well as in areas to the north-west of and around Cloncurry (Eldridge et al. 2001; Johnson et al. 2001; Johnson and Eldridge 2008; Eldridge 2012). The species may also occur in the Northern Territory (Johnson and Eldridge 2008).

It is less common in the north-west part of its range in the vicinity of Lawn Hill (Eldridge et al. 2001), and appears to have declined around the Winton area in the south-east (Johnson et al. 2001; Johnson and Eldridge 2008; Eldridge 2012).



Habitat

Favoured habitat of *P. purpureicollis* includes boulder piles, rocky slopes, cliffs and gorges in limestone areas, and sandstone and quartzite outcrops amongst dry *Eucalyptus* and *Acacia* woodlands.

Also inhabits spinifex grasslands in association with these rocky habitats (Menkhorst and Knight 2001; Johnson and Eldridge 2008; Eldridge 2012).

Seasonal and timing considerations

In general, searches for signs and other inferential evidence, as well as infra-red camera trapping can be undertaken at any time of the year.

Observation surveys should be conducted at dawn and/or dusk, and ideally in the cooler months when animals are most likely to sunbathe (DSEWPaC 2011; Eldridge 2012). To maximise detection success, surveys should be undertaken during fine weather conditions, and avoid the hotter months and inclement weather (i.e. rainfall periods) (M. Eldridge pers. comm. 2012).

Recommended survey approach

The following survey techniques should be prioritised in order as per the headings below:

Searching for signs

Diurnal searches for signs of activity, particularly their distinctive scats, is the most efficient method in determining the presence of *P. purpureicollis* (M. Eldridge pers. comm. 2012).

Other signs of activity include smooth worn rock ledges and tracks in sandy substrate on rock ledges or along cliff lines. All suitable rocky habitat should be searched thoroughly, such as mid-level ledges and holes (DSEWPaC 2011).

Infra-red camera trapping

Using Infra-red camera traps to detect the presence of rock-wallabies is becoming an increasingly popular survey technique. To maximise the likelihood of detection, cameras should be placed at a source of water or baited with lucerne contained within an elevated net bag, preferably in or adjacent to suitable habitat.

Camera traps should also be positioned near the exit points of refuges and known shelter sites (identified from either direct observation or presence of scats) (DSEWPaC 2011).

Observation surveys

Observation surveys can be undertaken to detect basking animals. These can be conducted from the ground using binoculars beneath suitable habitat, or air (i.e. from a plane or helicopter). Keep in mind this survey technique can prove difficult in detecting animals, mostly due to their secretive nature (M. Eldridge pers. comm. 2012). Thus, these surveys are best undertaken during cooler weather and encompassing a dawn and/or dusk period when *P. purpureicollis* is most likely to be active (e.g. sunbathing in the early morning), and should avoid the summer months or hot weather (DSEWPaC 2011; Eldridge 2012).

Other inferential evidence

The collection of other inferential evidence in the vicinity of suitable habitat may indicate the presence of the species. Searches for predator scats, owl pellets, and targeting predatory bird and mammal nests and dens may prove useful in detecting *P. purpureicollis* (DSEWPaC 2011).

Survey effort guide

There is currently no information on detection rates for *P. purpureicollis*. However, the recommended level of effort below may provide a reasonable opportunity to detect *P. purpureicollis* if present in the project area.

Minimum effort per 5 ha of suitable habitat	
Survey technique	**Minimum Effort**
Searching for signs	2 hours per survey day
Infra-red camera trapping	5 cameras, at least 14 nights
Observation surveys	4 hours per survey day
Other inferential evidence	1 hour per survey day

Ethical and handling considerations

- Conduct surveys with a minimum of two observers with prior experience of surveying rock-wallabies (DSEWPaC 2011).
- When surveying from the air, minimise disturbance to animals and ensure individuals are not exposed to potential predators and/or do not fall (DSEWPaC 2011).
- Wear gloves when handling scats and other animal signs to reduce exposure to zoonotic diseases.

Acknowledgements

These guidelines were prepared by Jesse Rowland in July 2012. Advice and comments on drafts for *Petrogale purpureicollis* were provided by Mark Eldridge.

Citation

Rowland, J. 2012. Purple-necked rock-wallaby, *Petrogale purpureicollis*. Targeted species survey guidelines. Queensland Herbarium, Department of Environment and Science, Brisbane.

Key references

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