Department of Environment and Conservation

Fauna profiles

Get to know Western Australia's fauna





Quokka

Setonix brachyurus (Quoy and Gaimard, 1830)

Photo: Allan Burbidge/DEC

Size

Head and body length

430-540 mm in males

390-500 mm in females

Tail length

250-310 mm in males

235-285 mm in females

Weight

2.7-4.2 kg in males

1.6-3.5 kg in females

Subspecies

None recognised

Description

Pelage is grizzled grey-brown above with a tinge of rufous, and the underparts are lighter in colour. Fur long, thick, coarse. Ears very short and rounded, snout unfurred. Tail short, tapered, and close-haired. No definite body markings.

Other Common Names

Short-tailed wallaby, Short-tailed Pademelon. Indigenous names include Ban-gup, Bungeup, Quak-a and Bangop.

Distribution

At the time of European settlement the Quokka was common in the south-west of Western Australia. Fossil evidence suggests that it has always been restricted to this region and to Rottnest and Bald Islands but, while numbers on Rottnest Island remained high, mainland populations have declined.

The current distribution of the Quokka includes Rottnest and Bald Islands, and at least 25 sites on the mainland, including Two Peoples Bay Nature Reserve and Torndirrup, Mt Manypeaks and Walpole-Nornalup National Parks, and swamp areas through the south-west forests from Jarrahdale to Walpole. The last known population on the Swan Coastal Plain occurs in an area known as Muddy Lakes near Bunbury.

Quokkas have been reintroduced to Karakamia Sanctuary.

For further information regarding the distribution of this species please refer to www.naturemap.dpaw.wa.gov.au

Habitat

On Rottnest Island the Quokka is widely dispersed. The Quokka survives on the island in a harsh, seasonally arid habitat where the largest populations exist around the lakes and settlement areas. The Quokkas tend to inhabit areas that provide refuge such as low dense heath, low forest (*Acacia rostellifera*) and the salt marsh and lakeside communities.

The mainland Quokka lives in the Darling Range and south-west regions of Western Australia, mostly inhabiting densely vegetated swamps and sometimes tea-tree thickets on sandy soils along creek systems and dense heath on slopes.

Behaviour

Information is currently limited to island Quokkas. Quokkas have an excellent thermoregulatory ability at ambient temperatures up to 44°C. Animals are known to fight for the available shelter on hot summer days, though temperatures such as this are rarely encountered on the island. Local populations are widely dispersed during winter, and as the days begin to become hotter in November

they begin to converge at night, sometimes from as far afield as 2 km, around permanent freshwater. The group has a well developed social organisation. Adult males form a linear hierarchy based on age and are dominant to females and juveniles, which themselves have no ranking. Males defend an individual space, and this defence is most marked in the vicinity of their resting sites.

Populations living in areas distant from permanent water bodies form groups of 25-150 adults which occupy group territories. Very few individuals move outside their group territories, the boundaries of which are generally coincident with topographical features.

Mainland quokkas tend to hide in runs among vegetation during the day and forage along the swamp margins at night.

Diet

Studies of the diet in the northern Jarrah forests found the Quokka to be a browser, with peppermint (*Agonis flexuosa*) and *Thomasia* species being dominant vegetation items in their diet.

Plant quality on Rottnest Island progressively declines in water and nitrogen content through the summer. By the end of summer, animals become anaemic and many die, those populations farthest from sources of fresh water suffer the highest mortality. Seasonal debility arises from insufficient drinking water for metabolic and thermoregulatory needs which, in turn, leads animals to eat more succulent but less nutritious plants, thus adding the effects of nitrogen deficiency to those of dehydration.

Breeding

On the mainland, the Quokka can breed throughout the year but on Rottnest Island the breeding season is brief. Females come into oestrus in January if the year is mild but in hot years, do not do so until March. A single young is carried in the pouch until August and is suckled until October. Most females carry a dormant blastocyst resulting from a mating shortly after the first birth of the year but few blastocysts resume development after that young has left the pouch.

Threatening processes

Much of the decline of the Quokka coincided with the arrival of the fox in the south-west of Western Australia in the late 1920's. Clearing and burning of remnant swamp habitat has also contributed to their decline through increased exposure to fox predation.

Conservation status

Western Australian Wildlife Conservation Act 1950
Schedule 1 – Fauna that is rare or is likely to become extinct (Threatened ranked as Vulnerable)
Environment Protection and Biodiversity Conservation Act 1999
Vulnerable
IUCN Red List of Threatened Species
Near Threatened (Version 3.1)

Management in Western Australia

A recovery plan is in preparation. Management actions that are proposed, currently underway or have been completed include:

- Monitor known populations.
- Collate existing and future records of quokka occurrence.
- Control introduced predators.
- Investigate the effects of disturbances such as fire, timber harvesting and feral pig activity
- Undertake climatic modeling in relation to quokka habitat.
- Investigate aspects of biology and ecology such as diet and resource availability.
- Investigate effects of dieback (*Phytophthora cinnamomi*) on quokka populations on the mainland.
- Investigate health of quokkas on the mainland, Rottnest Island and Bald Island.

Other Interesting Facts

- The Dutch explorer Willem de Vlamingh referred to Rottnest Island as 'Rottenest' (rat nest') after the rat-like animals he saw there and which we now call Quokkas.
- During the 1920s, Quokkas were considered pests of pine plantations and other farming practices near Perth and were consequently hunted and poisoned.

Selected references

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Last updated 8 February 2012, for further enquiries please contact fauna@dpaw.wa.gov.au

Further information
Contact your local office of the Department of Environment and Conservation.
See the department's website for the latest information: www.dec.wa.gov.au.

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