



Burrowing Bettong (Boodie)

Bettongia lesueur (Quoy and Gaimard, 1824)


Photo: Babs & Bert Wells/DEC

Bernier and Dorre Islands

Head and body length

360 mm (mean)

Tail length

285 mm (mean)

Weight

1.28 kg (mean)

Barrow and Boodie Islands

Head and body length

280 mm (mean)

Tail length

207 mm (mean)

Weight

0.68 kg (mean)

Subspecies

Two subspecies have living populations:

- *Bettongia lesueur lesueur* (Bernier and Dorre Islands)
- *Bettongia lesueur* unnamed subspecies (Barrow and Boodie Islands)

The third subspecies (*Bettongia. lesueur. graii*) is thought to have occurred on the mainland but the taxonomic status of the mainland population is uncertain.

Description

Small thickset, nocturnal rat-like kangaroo. Yellow-grey above (grey on islands) and light grey below, short rounded ears and a lightly haired and thick tail. Individuals from Bernier and Dorre Islands are larger than those on Barrow and Boodie Islands.

Other Common Names

Lesueur's Rat Kangaroo, Lesueur's Bettong, Burrowing Rat Kangaroo, Tungoo. Boodie is its Noongar name; many other Aboriginal names have been recorded.

Distribution

Bettongia lesueur lesueur occurs on Bernier and Dorre Islands in Shark Bay (Western Australia), and has been reintroduced to Heirisson Prong and Faure Island in Shark Bay, Dryandra Woodland in the Wheat belt and to Yookamurra Sanctuary and Roxby Downs in South Australia.

An unnamed subspecies occurs on Barrow Island and has been successfully reintroduced to nearby Boodie Island.

An extinct subspecies occurred on the mainland. Specimens and sub-fossil records have been found in western Victoria, western New South Wales, south-western Queensland and in South Australia. Abandoned burrow systems are common in Western Australian deserts.

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

Habitat

On the mainland and islands, Boodies occupy arid and semi-arid habitats. On Dorre Island, Boodies occur in coastal dune and *Triodia* habitats. On Bernier and Barrow Islands, they show no preference for any particular habitat type, although most warrens) on Barrow Island occur in well-drained areas. Old Boodie burrows on the mainland were among deep sandy or loamy patches of soil in forest, scrub and thicket. In the western deserts, old Boodie burrows have been found in a variety of stony and sandy soils.

Behaviour

Boodies are nocturnal, and construct and live in their own burrows. Burrows vary in structure from simple tunnels to complex warrens with many (4-91) entrances and deep, interconnecting pathways. Nests made from vegetation are constructed in burrows.

Boodies emerge after sunset and re-enter their burrows before sunrise. Up to 20 individuals have been recorded living communally in a warren system. However, Boodies tend to forage independently at night rather than forming feeding aggregations. Movement is strictly by their hindlegs and the forelimbs, the tail is not used for support except when the animal is stationary. On Dorre and Bernier Islands, trapping data shows that individuals moved between 60m to 2.2 km. On Barrow Island, one individual was reported to move 5 km. Evidence suggests that food is located by smell. Boodies are very vocal and make a variety of grunts, hisses and squeals.

Diet

Boodies are omnivorous, and feed mainly by digging for tubers and bulbs, but are also known to consume plants, seeds, fruit, nuts, flowers, termites and fungi.

Breeding

Boodies breed throughout the year, though the length of the breeding season varies in response to rainfall. On Bernier and Dorre Islands, oestrous lasts 23 days and the gestation period is 21 days. The reproductive cycle is delayed during lactation and embryonic diapause occurs. A single young is born, and remains in the pouch for about 115 days and is sexually mature at five months of age. Females can produce up to three young per year. Boodies are known to survive to at least three years of age.

Threatening processes

In the early days of European settlement, Boodies were one of the most abundant of small mammals to occur across mainland Australia. By the early 1960s, the species was extinct on the mainland. Evidence from a translocation experiment in the Gibson Desert (Western Australia), suggests that predation by foxes and cats was a major factor in their extinction from the mainland.

Conservation status

- *Bettongia lesueur*

IUCN Red List of Threatened Species

Near Threatened (Version 3.1)

- *Bettongia lesueur graii*

Environment Protection and Biodiversity Conservation Act 1999

Extinct

- *Bettongia lesueur lesueur*

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

- *Bettongia lesueur* unnamed subsp.

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

Management

The Boodie is a taxa included in the Shark Bay Mammals Recovery Plan that has been drafted. Management actions proposed, currently underway or have been undertaken include:

- Protect wild populations and their habitat.
- Maintain captive populations
- Undertake reintroduction to suitable mainland and islands sites.
- Use population viability analysis (PVA) to compare the viability of wild as well as current and potential reintroduced populations.

Other interesting facts

- Other mammal species, such as the Chuditch, Bilby and Brushtail Possum, have been reported to shelter in the warrens made by Boodies.

Selected references

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