

Rufous Hare-wallaby or Mala *Lagorchestes hirsutus* (Gould, 1844)

Size

Bernier and Dorre Islands

Head and body length

310–360 (330) mm in males

360–390 (375) mm in females

Tail length

260–280 (270) mm in males

245–305 (275) mm in females

Weight

Bernier and Dorre Islands

1.3–1.8 (1.6) kg in males

0.8–1.9 (1.7) kg in females



Photo: Babs & Bert Wells/Department of Conservation and Land Management

Tanami Desert

0.8–1.6 (1.2) kg in males

0.9–1.3 (1.1) kg in females

Subspecies

Four are currently recognised:

- *L. h. bernieri*, from Bernier Island (Western Australia)
- *L. h. dorrae*, from Dorre Island (Western Australia)
- *L. h. hirsutus* (extinct, Western Australia)
- *L. hirsutus* unamed ssp (extinct in the wild, central Australia)

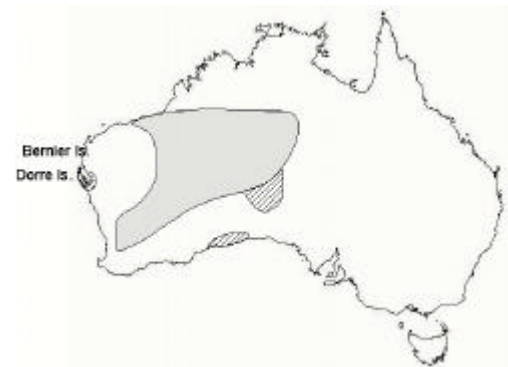
Description

A small macropod. Rufous above including head and paler below. Animals from Bernier and Dorre Islands are larger and are grey-brown above with a dark grey head. Fur is long and soft.

Other common names

At least 30 indigenous names exist for this macropod, including the most commonly used, mala.

Distribution



Key To Map: Islands = present distribution; Mid-grey = historic (> 30 years); Hatched = Late-Holocene sub-fossil.

On the mainland the mala was distributed throughout the spinifex deserts of central Northern Territory, the Great Sandy and Gibson Deserts of Western Australia, and the north-western parts of South Australia.

The mala now survives on Bernier and Dorre Islands, and animals from central Australia have been translocated to Trimouille Island in the Montebello Islands (Western Australia). Other populations on the mainland only exist as captive colonies following the extinction of the last two known populations in the Northern Territory following fox predation and fire.

Habitat

On Bernier and Dorre Islands the rufous hare-wallaby is found in dune habitat and hummock grasslands, and myrtaceous heath and spinifex on sandplains. On the mainland it inhabited spinifex and hummock grasslands of the central deserts interspersed with sand dunes, salt pans and saline samphire areas. In south-western Australia, they occurred on sand plains with low, woody shrubs.

Behaviour

The rufous hare-wallaby shelters during the day in a shallow depression (squat) dug under a spinifex hummock or low shrub. This may be developed into a burrow, particularly in the heat of summer. The hare-wallabies often use more than one squat. When flushed from their hide, they escape in an explosive zigzag burst of speed, often uttering a high-pitched nasal squeak.

The species is relatively solitary with few interactions between individuals, although limited social contact occurs among captive individuals. Males occupy an exclusive home range, which encompasses the home ranges of several females. Females with pouch young have been observed on occasion to eject young when placed under stress. Activity occurs from dusk to dawn. Some evidence suggests there is a degree of hierarchy among males in relation to access to females and feeding stations.

Diet

The diet is flexible and allows the species to exploit food resources whose availability is often limited in arid environments. Perennial grasses appear to be important in the diet, along with grass seeds and the seeds and bulbs of sedges. Insects may also be eaten during dry periods. The species is able to cope with a high fibre diet of spinifex but prefers the more nutritious foods mentioned above.

Breeding

Breeding is continuous for the mainland populations under favourable conditions. Females are polyoestrous, and embryonic diapause has been recorded. There is a relatively short gestation period and young remain in the pouch for only 124 days, allowing the female to produce up to three offspring per year. Females become reproductively mature when they are between five and 23 months and males between 14 and 19 months.

Threatening processes

On the mainland habitat degradation due to rabbits, grazing and frequent and extensive wildfire have reduced populations of mala. In addition, predation by cats and foxes has forced remnant populations to extinction. It appears that there has been no decline on Bernier and Dorre Islands, however, populations fluctuate dramatically in response to drought, fire and varying rainfall.

Conservation status

- *L. hirsutus* unnamed ssp

2000 IUCN Red List of Threatened Species

Western Australia Wildlife Conservation Act

Environment Protection and Biodiversity Conservation Act

Critically Endangered

Extinct in the Wild

Threatened (Endangered)

- *L. h. bernieri* and *L. h. dorrae*

2000 IUCN Red List of Threatened Species

Western Australia Wildlife Conservation Act

Environment Protection and Biodiversity Conservation Act

Vulnerable

Threatened

Threatened (Vulnerable)

• <i>L. h. hirsutus</i>	
2000 IUCN Red List of Threatened Species	Extinct
Environment Protection and Biodiversity Conservation Act	Extinct
Commonwealth Endangered Species Protection Act	Schedule 1 (Extinct)

Management in Western Australia

Mainland populations

- Captive breeding to provide animals for translocation to offshore islands and secure mainland habitats.
- Monitoring of translocated mala populations and habitat.
- Management of habitats in and adjacent to mala populations.
- Clarification of population genetics.
- Feral animal control in Francois Peron National Park as preparation for translocation.

Island populations

- Protection of the island habitat from frequent and extensive fires.

Other interesting facts

- The rufous hare-wallaby has decreased since the 1930s from being one of the most abundant and widespread macropods of central Australia to one of the rarest and most limited in its distribution.
- In the central deserts, Aborigines hunted the hare-wallabies by tracking them to their hides and either stamping on them, or on the entrance to their burrows and digging them out. Aborigines also lit fires to drive mala towards hunters.

Selected references

Lundie-Jenkins G. (1993). Observations on the behaviour of the Rufous Hare-wallaby, *Lagorchestes hirsutus* Gould (Macropodidae: Marsupialia) in captivity. *Australian Mammalogy* 16: 29-34.

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Website links

http://www.naturebase.net/projects/west_shield.html

<http://www.ea.gov.au/biodiversity/threatened/action/marsupials/15.html>