

Brush-tailed Phascogale *Phascogale tapoatafa* (Meyer, 1793)

Size

Head and body length
160–261 (199) mm in males
148–223 (181) mm in females

Tail length

175–234 (207) mm in males
160–226 (194) mm in females

Weight

0.18–0.31 (0.23) kg in males
0.11–0.21 (0.16) kg in females

Subspecies

Two subspecies are currently recognised:

- *P. t. pirata* (northern Australia)
- *P. t. tapoatafa* (southern Australia)

Recent morphological and genetic evidence suggests these two subspecies should be reclassified into three species (northern Australia, eastern and south-eastern Australia, south-western Australia)



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

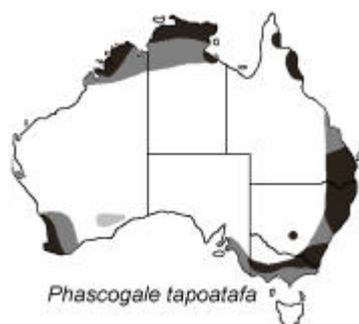
Description

Small, strongly arboreal dasyurid, grizzled grey above and cream to white below with large naked ears and a conspicuous black 'bottle-brush' tail. The claws are long and sharp and the hind feet have striated foot pads.

Other common names

Common wambenger (Western Australia), tuan (Victoria).

Distribution



Key To Map: Black = present distribution; Mid-grey = historic (> 30 years); Pale-grey = Fossil

P. t. pirata

Previously known from a small number of localities from the Kimberley (Western Australia), top end of Northern Territory and Cape York Peninsula. Recent records are few from these areas, though records from the Jabiru area of the Northern Territory are frequent.

P. t. tapoatafa

Formerly widespread in eastern and south-western Australia and presumed abundant in appropriate habitat of woodland and open forest.

Present range is believed to have been reduced to approximately 50 per cent of its former range. Now known from Perth and south to Albany, west of Albany Highway. Occurs at low

densities in the northern Jarrah forest. Highest densities occur in the Perup/Kingston area, Collie River valley, and near Margaret River and Busselton.

Habitat

P. t. pirata

All sightings are in drier habitats and not rainforest habitats. Recent records across northern Australia have been from tall open forest of *Eucalyptus miniata* and *E. tetradonta*. On Cape York, records have been from *hibiscus* trees, and from sparse open woodlands, near riparian forests, open forests, deciduous vine thickets, and sparse rocky sclerophyll (leafy) woodland.

P. t. tapoatafa

This subspecies has been observed in dry sclerophyll forests and open woodlands that contain hollow-bearing trees but a sparse ground cover. Records are less common from wetter forests.

Behaviour

Active between dusk and dawn (though emerging later in mid-winter), individuals forage almost exclusively among the tree canopy. Individuals tear the bark from trees to reach and remove prey. During the breeding season, females can repel an approaching male by a vocal threat.

Male home ranges overlap with those of other males and females, and increase during the breeding season. Female home ranges covers 20 to 70 hectares, and does not overlap those of unrelated females.

Nesting varies across the year, with individuals using more than 20 nest sites across the year. Nest sites include hollow tree limbs, rotten stumps, and even birds' nests. Lactating females show a preference for large tree cavities with small entrances. They construct a nest of bark, feathers and fur.

Diet

Brush-tailed phascogales are opportunistic feeders. In Victoria, they are primarily arboreal insectivores. Their diet includes invertebrates (cockroaches, beetles, centipedes, spiders, ants, moths), nectar, small birds and small mammals.

Breeding

Mating period varies with locality, but generally occurs over a three-week period from mid-May to early July. During this time, females are chased by males and will inspect their chest glands for scent. During the breeding season, males have large home ranges. Mating may last for one hour, and often occurs in tree hollows. The gestation period is approximately 30 days, and a litter size of up to eight may be born, though it may be as low as three. The open pouch develops a fleshy rim that completely encloses the newborn young. At seven weeks, the young are deposited into a maternal nest. When the female leaves the nest to forage for food, the young cool down and become torpid, but are warmed when the female returns to the nest every few hours. Mortality of the young is highest during these initial lactation periods. Maternal attendance decreases as the young acquire fur. At 20 weeks of age, the mother does not return to the nest until dawn. Juveniles disperse in mid summer, with males moving larger distances than females. Like some other dasyurids, there is a male die-off following the mating season. Weakened by stress-induced illnesses, they usually fall prey to owls, foxes and cats.

Threatening processes

Habitat clearing and fragmentation, and habitat alteration by logging and mining. The greatest threat appears to be the reduced availability of trees with hollows, and predation by cats. Predation by foxes is also a threat. Residual habitat is often fragmented, thereby isolating populations and impeding genetic exchange. In addition, in northern Australia, the subspecies

may be at risk from diseases introduced by cane toads and feral cats, and changed fire frequencies that may limit hollow availability.

Conservation status

- *P. t. tapoatafa*

2000 IUCN Red List of Threatened Species	Lower Risk (near threatened)
Western Australian Wildlife Conservation Act	Not Listed (Priority 3)
Environment Protection and Biodiversity Conservation Act	Not Listed

- *P. t. pirata*

2000 IUCN Red List of Threatened Species	Lower Risk (near threatened)
Western Australian Wildlife Conservation Act	N/A
Environment Protection and Biodiversity Conservation Act	Not Listed

Management in Western Australia

- Exotic predator control.
- Silvicultural prescriptions to ensure adequate retention of habitat trees with suitable hollows.
- Identify key populations to meet conservation objectives.

Other interesting facts

- When alarmed, the brush-tailed phascogale taps its forefeet repeatedly against the bark of a tree.
- Females may live to three years in the wild by which time their canine teeth are blunt and their incisors worn nearly to the gum.
- The brush-tailed phascogale is an agile tree climber, and its hind foot can be rotated 180 degrees at the ankle to aid it with its climbing.

Selected references

Rhind, S. (1993-94). Fascinating Phascogales. *LANDSCOPE* 9(2): 35.

Soderquist, T. (1995). Brush-tailed Phascogale. In R. Strahan (Ed.) *The Mammals of Australia*. Australian Museum and Reed Books. Chatswood, NSW.

Maxwell S., Burbidge A.A, Morris K. (Eds) (1996). *The 1996 Action plan for Australian Marsupials and Monotremes*. Wildlife Australia, Canberra.

Rhind, S. G. (1996). Habitat tree requirements and the effects of removal during logging on the marsupial brush-tailed phascogale (*Phascogale tapoatafa tapoatafa*) in Western Australia. *The Western Australian Naturalist* 21: 1-22.

Website links

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

<http://www.ea.gov.au/biodiversity/threatened/action/marsupials/24.html>

<http://www.ea.gov.au/biodiversity/threatened/action/marsupials/25.html>

<http://www.perthzoo.wa.gov.au/phascogale.html>