

# Fact sheet

## Brush-tailed Phascogale

This fact sheet has been designed to give a brief overview of the Brush-tailed Phascogale. If you have any further questions or queries in regards to the Brush-tailed Phascogale please feel free to contact Trevor or myself and we will aim to find out the answers and provide them to you as soon as is possible.

Thank-you again for your interest and assistance in the current project, and I hope this fact sheet helps inform you and answer some common questions.

### Contact Details

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## Taxon Summary

**Family:** Dasyuridae

**Subfamily:** Phascogalinae

**Scientific Name:** *Phascogale tapoatafa tapoatafa* (Meyer, 1793) (Southern Australian subspecies)

**Common names:** Brush-tailed Phascogale, Tuan.

## What is a Brush-tailed Phascogale (BTP)?

The Brush-tailed Phascogale is a carnivorous, nocturnal marsupial. It is also arboreal in nature, carrying out the majority of activities in trees tops and on trunks.

The top of the head, back, legs and arms are covered in deep grey fur, with a pale creamy underbelly. The ears are bald and the distinctive bottle-brush tail a deep black colour.

Around the size of a rat, average body length (excluding tail) measurements for males is 202 mm, and 179 mm for females. Their distinctive tails are around the same length as their body.

## **What does it eat ?**

A predominantly carnivorous species, the BTP diet consists largely of invertebrates which it gathers by using its claws to tear away and search under tree bark (most commonly rough-barked eucalypts) . These include cockroaches, beetles, bull ants, spiders and centipedes. They are also known at times to predate upon small vertebrates, and given the opportunity they will attack domestic poultry. Indeed, there have been numerous recordings of this chicken snatching behaviour throughout the Geelong region in recent times.

Nectar also plays an important part in their diet, with flowering eucalypts, particularly boxes and ironbarks, providing a bountiful resource in the right season. BTP's in turn assist in pollinating the trees.

## **Where does it 'live'; what is its habitat ?**

### **Housing**

One reason for the species' decline is the loss of old-growth forest areas, where old, hollow trees provided places for the phascogales to build nests ; up to 20 nests may be utilized by each individual per year. Breeding also predominately occurs within tree hollows.

The nests are built in tree hollows, rotted stumps and tree cavities, which only form in very old trees. Lactating females strongly favour large tree cavities with small secure entrances, which allow sufficient room for a nest to be built, whilst reducing predator detection and entry. Existing globular bird nests can also be utilized by the species due to its small size and weight.

Nests are spherical in shape and are constructed of bark strips, fur and feathers. A strong little animal, females have been known to carry bark strips up to a third of their own weight, to construct nests up to 30 times their own size !. The nests also often contain pungent faeces which may act as a territorial marker and/or discourage competitors such as sugar gliders.

### **Habitat**

The BTP are not commonly found in wetter forests, favouring dry sclerophyll forests and open woodlands with a generally sparse ground-storey, which contain the above nesting resources.

### **Home range**

A home range is the area which individual animals traverse on a daily, seasonal and annual basis, in order to access resources such as mates, food and shelter. The home range can be exclusive or overlap with other individuals, dependant on the animals being studied.

After the young have dispersed from the nest, BTP's rarely share a nest. Home ranges will differ throughout the year and between the sexes. Females home ranges do not overlap with unrelated females, and cover approximately 20-70 hectares. Males home ranges cover over 140 hectares, overlapping with many females and males, allowing them greater access to females come breeding season, when the home range may increase.

## What is its life strategy; (breeding, offspring and lifespan)?

The breeding season is restricted to a three week time period between mid-May to early July. Gestation lasts approximately 30 days, after which three to eight young are born. After 20 weeks, maternal care greatly decreases, with young dispersing from mid summer.

At 11 to 12 months of age, directly after breeding, mass male die off occurs. As with many other small native marsupials, this strategy allows room and resources for the next generation to utilize without competition, and prevents the negative impacts of potential inbreeding.

Females rarely survive two breeding seasons, most commonly only raising one litter. Although records suggest females may survive up to three years in the wild, they are prone to disease and starvation due to wearing away of their teeth.

## Where is it found in Australia?

### **Australia wide distribution**

The southern Australian subspecies, *P. tapoatafa tapoatafa*, is largely restricted to the eastern coast of Australia, passing through QLD, NSW and Victoria, with a small pocket in south-western WA. Once located on the Eyre Peninsula in South Australia, it is now presumed **extinct** there, with the last reliable records taken in 1967. They are also noted as extinct on the Bellarine Peninsula.

### **Victorian distribution**

Within Victoria, the BTP distribution is quite fragmented, with records from locations to the east and north-east of Melbourne, Heathcote and Bendigo, north-eastern Victoria (Broadford to Wodonga) and far western Victoria from Mt. Eccles to Apsley. Within our region, records include areas in central Victoria surrounding Ballarat, as well as the Brisbane Ranges.

## Why the fuss over the BTP; What's its status?

It is estimated that land clearing due to agricultural development and deforestation has led to a reduction in the BTP's range (entire area it could potentially exist) by **50%**. This has led to greater exposure to predation by native and introduced species (cats and dogs) and reduced nesting places, as well as road hazards.

The Brush-tailed Phascogale is now recognized as a **rare, vulnerable and/or threatened** species on a State and National level, as listed below.

**Vulnerable species:** Schedule 2 of the *Threatened Species Conservation Act 1995*

**Threatened species:** Schedule 2 of the *Flora and Fauna Guarantee Act, 1988*

**Lower Risk (near threatened):** Action Plan for Australian Marsupials and Monotremes, 1996

**Near Threatened:** IUCN

**Presumed extinct:** South Australia

As part of a healthy, functioning ecosystem, it is of course important we aim to preserve biodiversity; this includes all the animals, plants and resources nature contains. The loss of a species such as the BTP could impact on others, including those which predate on it, as well as species it feeds on and the trees it helps pollinate.

### **When will we survey?**

Surveying will not take place until earlier next year to ensure no females with young are potentially trapped, or immature young themselves. This will also be before the mating season, when animals are more stressed and will be more at risk of harm should we trap.

### **What is the purpose of the survey ?**

Due to the lack of detailed information on the ecology, and particularly current distribution of this increasingly rare and elusive species, we hope our surveying efforts coupled with others undertaken within Victoria will help increase our knowledge of the species ecology. In turn, it is hoped this information will allow the implementation of more focused and effective management strategies to protect, maintain and enhance current populations and utilized habitats.

### **Bibliography**

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