



The long-nosed potoroo *Potorous tridactylus*, Tasmanian bettong *Bettongia gaimardi* and Tasmanian pademelon *Thylogale billiardierii* (also referred to as the rufous wallaby) are the smallest members of the group known as macropods living in Tasmania. The term macropod is derived from the scientific name Macropoidea which means 'large footed'. Members of this group are characterised by their large hind legs and usually move around by hopping.

## Description

The pademelon is a stocky animal with a relatively short tail and legs to aid its movement through dense vegetation. It ranges in colour from dark-brown to grey-brown above and has a red-brown belly. Males, which are larger than females, have a muscular chest and forearms, and reach up to 10 kg in weight and 1 - 1.2 m in overall length.

The potoroo and bettong are in some respects quite similar. Both have short, round ears and often have a white tip to their tail which is believed to distract predators such as large owls. Bettongs typically reach 2 kg in weight and are coloured brown-grey above and white below. Potoroos reach 1.3 kg in weight and range in colour from red-brown on the west coast to grey on the east coast, with paler fur on the belly. The two animals are best distinguished by the relative length of the tail. The tail of the bettong is as long as the head and body while, in comparison, the tail of the potoroo is significantly shorter. The potoroo may also be identified by its darker colour, and its larger, more pointed nose which has a bare patch of skin above the nostrils.

## Distribution

The potoroo and pademelon are widespread in Tasmania and are found on the Bass Strait islands. The bettong is only found in the eastern half of Tasmania. The numbers and distribution of the pademelon have been increasing over the past 20 - 30 years to the point where it is now common right across the State. Both the pademelon and bettong are extinct on the mainland because of predation by foxes and large scale land clearance. The potoroo is still found on the east coast of the mainland although its range has decreased.

## Habitat

The bettong and potoroo are both reasonably common in the forests of Tasmania's east coast. Although they have similar diets, competition is avoided as the bettong prefers dry open eucalypt forests and grassy woodlands while the potoroo is found in wet dense scrub under which it forms a system of tracks or 'runways'. Pademelons also seek out dense vegetation to provide shelter for runways. Rainforest is preferred although wet gullies in dry open eucalypt forest are also used. Such habitat next to cleared areas where feeding can occur is especially favoured.

## Lifestyle

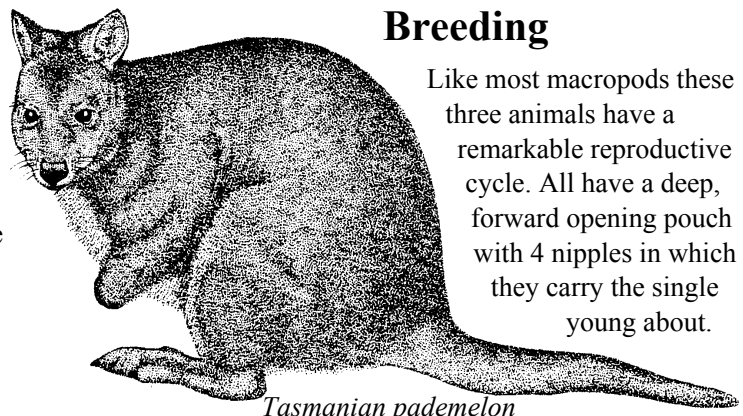
All three species are nocturnal, spending the hours of daylight in thick vegetation or, in the case of the bettong, in a domed, camouflaged nest of grass, much like that of a bandicoot. The bettong collects suitable nesting material and carries it back to the nest site in its tail which it curls downward around the bundle. In comparison to the potoroo which does not venture far when feeding, the bettong may travel up to 1.5 km from the nest to a feeding area; quite a journey for an animal this size!

The pademelon is generally sedate, often feeding alongside other species of marsupials. Pademelons, potoroo and bettongs often feed alone but may also be seen in small groups. However, none of these species are very sociable when compared to larger macropods such as the forester kangaroo. All are very agile and capable of bursts of speed if disturbed. If cornered they will lash out with their strong hind legs and in the case of the potoroo and pademelon may give a hissing grunt!

Male pademelons are particularly strong and the fur may literally 'fly' when they fight!

## Breeding

Like most macropods these three animals have a remarkable reproductive cycle. All have a deep, forward opening pouch with 4 nipples in which they carry the single young about.



Tasmanian pademelon

There is no specific breeding season with animals capable of giving birth throughout the year. However, in the potoroo there is a tendency for most births to occur from the end of winter to early spring, while 70% of pademelon births occur around the beginning of winter. Birth occurs 21 days after mating in bettongs, after 30 days in pademelons and after 38 days in potoroos. All give birth to a single young that remains in the pouch for about 3.5 months in bettongs, 4 months in potoroos and 6.5 months in pademelons.

Soon after giving birth they mate again. This new embryo does not start to develop until either the young is almost ready to leave the pouch or dies. When this new young is born it makes its way into the pouch and attaches itself to a different nipple. Again, soon after the birth the mother will mate. As this cycle continues, it is possible for a female to be suckling a pouch young, a larger young outside the pouch, and be carrying an undeveloped embryo.

This cycle is aided by a remarkable ability to produce two quite different types of milk at once. Through one nipple will come milk suited to the growing pouch young and through another will come milk specifically for the larger young outside the pouch! Because of the relatively short time that young bettongs and potoroos spend in the pouch, these animals often produce two, and in the case of bettongs even three, young per year. Young potoroos and bettongs are weaned at 5 - 6 months and are sexually mature at about 12 months of age. Pademelons are weaned at 7 - 8 months and are sexually mature at 14 - 15 months. Bettongs and potoroos live for 2 - 3 years in the wild and pademelons 5 - 6 years.

## Diet

The diet of the pademelon consists of herbs and green shoots, with short green grasses being preferred. The diet of the bettong and potoroo includes seeds, roots, bulbs and insects. However, the main components in the diet of both the bettong and potoroo are underground fungi which are dug up using the strong forepaws.

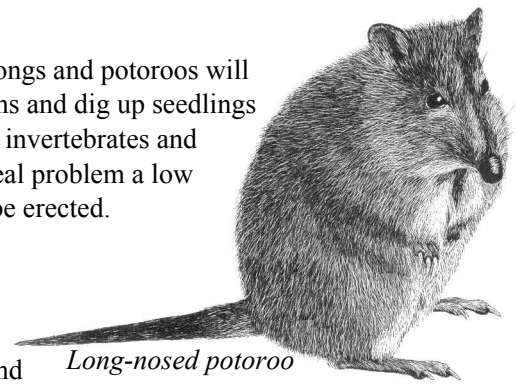


*Tasmanian bettong*

Occasionally, bettongs and potoroos will venture into gardens and dig up seedlings in a search for soil invertebrates and fungi. If this is a real problem a low netting fence can be erected.

## Status

The pademelon is both widespread and abundant. Although partially protected, hunting is allowed; its pelt is commercially valuable and the meat is excellent.



*Long-nosed potoroo*

Both the potoroo and bettong remain moderately common in suitable habitat. However, both species have been affected by the clearing of bush areas, with new growth forest being less suitable for their needs. As the bettong is less numerous than the potoroo, and its highest densities are found on private land, it is potentially vulnerable. Both are wholly protected.

Many carnivores prey on these small macropods. Pademelons were undoubtedly important in the thylacine (Tasmanian tiger) diet and are now important in the diet of Tasmanian devils, spotted-tail quolls and wedge-tailed eagles. Masked owls, eastern quolls, feral cats and dogs regularly prey on potoroos and bettongs.

Should the fox become established in Tasmania these species will be under threat

## How you can help

To prevent pet animals taking native wildlife — desex pet cats and attach a bell to their collar, do not dump unwanted cats, and do not let dogs roam freely in areas where native wildlife may be present.

## Further information

Green, R. H. (1993). *The Fauna of Tasmania — Mammals*. Potoroo Publishing, Launceston.

Strahan, R. (ed). (1995). *The Mammals of Australia*. Reed Books, NSW.

Watts, D. (1993). *Tasmanian Mammals — A field guide*. Peregrine Press, Tasmania.

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