



# Mammals of The Sixth Creek Catchment

by Tony Robinson  
 Manager, Biodiversity Survey and Monitoring  
 National Parks and Wildlife, South Australia

An extensive Biological Survey of the Southern Mt Lofty Ranges (SMLR) south of the Gawler River was carried out by National Parks and Wildlife SA (NPWSA) in 2000, and, in putting together the results of this work, we have scoured the published and unpublished references and the mammal collections of the South Australian Museum to put together the best possible picture of the mammals of this area.

Of the 23 species of native terrestrial mammals known to inhabit the SMLR at the commencement of European settlement of South Australia in 1836, only fourteen can now be confirmed as currently resident within the region. These consist of ten marsupial, three eutherian (all rodents) and one monotreme species. Of the nine species, which have disappeared from the region, seven are marsupials, one eutherian and one a monotreme. In addition there are eight species of resident bats and six species of introduced mammals.

In this article I will concentrate on the native mammals that can still be found in the Sixth Creek catchment and will only briefly mention the others where appropriate.

The two tables below show details of the current and extinct terrestrial mammal fauna likely to have occurred through the Sixth Creek catchment.

**Table 1: Status of Native Terrestrial Mammal Species still present in the Sixth Creek Catchment**

| SPECIES                         | COMMON NAME              | STATUS     |                 |
|---------------------------------|--------------------------|------------|-----------------|
|                                 |                          | Australia  | South Australia |
| <b>Marsupials</b>               |                          |            |                 |
| <i>Trichosurus vulpecula</i>    | Common Brushtail Possum  |            |                 |
| <i>Pseudocheirus peregrinus</i> | Common Ringtail Possum   |            |                 |
| <i>Phascolarctos cinereus</i>   | Koala*                   |            | Rare            |
| <i>Macropus fuliginosus</i>     | Western Grey Kangaroo    |            |                 |
| <i>Antechinus flavipes</i>      | Yellow-footed Antechinus |            |                 |
| <i>Isodon obesulus</i>          | Southern Brown Bandicoot | Vulnerable | Vulnerable      |
| <b>Monotremes</b>               |                          |            |                 |
| <i>Tachyglossus aculeatus</i>   | Echidna                  |            |                 |
| <b>Eutherians</b>               |                          |            |                 |
| <i>Hydromys chrysogaster</i>    | Water Rat                |            |                 |
| <i>Rattus fuscipes</i>          | Bush Rat                 |            |                 |

\* = Has been introduced to Mt Lofty Ranges and other parts of South Australia

**Table 2: Status of Native Terrestrial Mammal Species Considered Extinct in the Sixth Creek Catchment**

| SPECIES                         | COMMON NAME             | STATUS     |                 |
|---------------------------------|-------------------------|------------|-----------------|
|                                 |                         | Australia  | South Australia |
| <b>Marsupials</b>               |                         |            |                 |
| <i>Acrobates pygmaeus</i>       | Feathertail Glider #    |            | Endangered      |
| <i>Bettongia lesueur</i>        | Burrowing Bettong *     | Vulnerable |                 |
| <i>Bettongia penicillata</i>    | Brush-tailed Bettong *  |            | Rare            |
| <i>Dasyurus viverrinus</i>      | Eastern Quoll           |            | Endangered      |
| <i>Macropus eugenii</i>         | Tammar Wallaby #        |            | Endangered      |
| <i>Macrotis lagotis</i>         | Greater Bilby *         | Vulnerable | Endangered      |
| <i>Phascogale tapoatafa</i>     | Brush-tailed Phascogale |            | Endangered      |
| <b>Eutherians</b>               |                         |            |                 |
| <i>Canis lupus dingo</i>        | Dingo #                 |            |                 |
| <b>Monotremes</b>               |                         |            |                 |
| <i>Ornithorhynchus anatinus</i> | Platypus *              |            | Endangered      |

\* = Has been introduced or reintroduced to other parts of South Australia

# = Exists naturally in other parts of South Australia

### **Common Brushtail Possum**

Common Brushtail Possums are in fact far from common in the Sixth Creek Catchment, and the high densities in parts of the Adelaide suburbs is not a true reflection of their general status in more natural environments. They prefer areas dominated by smooth barked eucalypts and avoid the stringybark eucalypt dominated areas. There has been a very significant and disproportionate earing of the smooth barked eucalypt species, predominantly Blue Gum (*E. leucoxyton*) with lesser areas of Red Gum (*E. camaldulensis*) and Manna Gum (*E. viminalis*), because they grow on more fertile soils suitable for agricultural practices. Any remnant populations of Brushtail Possums remaining in the Sixth Creek Catchment should be cherished and efforts need to be made to expand remnants of their preferred habitats.

### **Common Ringtail Possum**

Unlike the Common Brushtail, Ringtails are still very common and widespread through their preferred stringybark forest habitat throughout the SMLR. They are most easily seen by spotlighting at night, and, as an example of the densities they can reach, the 2000 survey recorded 21 individuals in the stringybark woodland around Wilson's Bog in Cleland Conservation Park.

### **Koala**

Koalas were not native to the Mt Lofty Ranges at the time of European settlement and the present population results from several releases, both deliberate and unintentional, from 1935 onwards. These populations were severely reduced by the Ash Wednesday fires, but have now substantially recovered to the point where koalas are again widespread and common across the ranges. Currently the most northerly known population is in Warren Conservation Park

### **Western Grey Kangaroo**

The Western Grey Kangaroo was the most frequently recorded mammal species during the 2000 survey. However, evidence of its occurrence at 91 of the 111 sample sites was often by the presence of droppings, or scats. This was most often the case in the Adelaide Hills where they are in relatively low numbers. Although recorded throughout the region Western Grey Kangaroos are far more abundant in the southern Barossa and Fleurieu districts. The steep slopes and denser more continuous vegetation and more heavily settled escarpment habitat of the Adelaide Hills appear less suitable for kangaroos. In this central area of the region they are usually seen singularly or in small groups. One exception to this was found during the survey on the eastern side of Morialta Conservation Park where a group of around 30 is known.

## Yellow-footed Antechinus

Like the Southern Brown Bandicoot, the Antechinus is partly diurnal and with luck they can be seen moving with a characteristic jerky motion on trees and rock outcrops in the afternoons. Morialta CP is a good place to look. Although still relatively common in remnant areas of natural vegetation on Fleurieu Peninsula, it appears to now be absent from the large area of remnant native vegetation to the south-east of Williamstown, incorporating Hale and Warren Conservation Parks and Watt's Gully Native Forest Reserve. Despite the area being a large and continuous section of apparently suitable habitat, *A. flavipes* was not recorded at any of the seven sample sites within it during the 2000 survey.



PHOTO: Tony Robinson

Possibly the drier conditions in the Southern Barossa are unsuitable for this species. It still occurs to the east in the larger area of habitat encompassing Para Wirra Recreation Park and several SA Water and Forestry SA reserves, they are relatively scarce there compared with areas to the south. As there are no South Australian Museum records for the Hale and Warren Conservation Parks and Watt's Gully Native Forest Reserve area, it is not certain that the Yellow-footed Antechinus occurred there in the past. The present isolated nature of the area due to clearing of the surrounding lower areas for agriculture and grazing, may have created conditions which led to a local extinction through a major bushfire.

## Southern Brown Bandicoot

Bandicoots are partly diurnal so can sometimes be observed in the late afternoons. Their presence in an area can also be confirmed by finding their distinctive cone-shaped diggings. There have been no confirmed records north of the River Torrens since the 1960's. During this period, specimens were collected on two different occasions in Mount Crawford Native Forest Reserve in 1960.

Bandicoots were also recorded in Hale Conservation Park in the same year, and Warren Conservation Park in 1969. Within and around the Sixth Creek Catchment area they are probably still present in Horsnell Gully CP, Kenneth Stirling CP and Wotton Scrub CP.



PHOTO: Tony Robinson

Outside of the catchment, from Cleland Conservation Park, south to Mount Bold Reservoir, bandicoots appear to be relatively widespread and secure. In recent years, road killed bandicoots have been seen frequently on both Summit Rd through Cleland and on Upper Sturt Rd between Belair National Park and the Sturt Valley. This can largely be attributed to recovery of blocks of native vegetation since the Ash Wednesday bushfires and a program of fox baiting now carried out systematically across parts of this area.

It would appear that the distribution and status of the Southern Brown Bandicoot within the SMLR is currently stable, in that there is no evidence to suggest that it has deteriorated significantly since the 1980's. However, in light of the recent classification of this species as nationally endangered, a survey specifically directed toward clarifying the exact situation regarding the Southern Brown Bandicoot in the region is warranted. Work has begun on the preparation of a Recovery Plan for this species throughout SA, and any information on Southern Brown Bandicoot populations in the Sixth Creek Catchment should be reported to the Bandicoot Officer at Black Hill CP.

## Short-beaked Echidna

Echidnas are most often noted for an area by their characteristic diggings, often into meat ant mounds and, less frequently by their unmistakable droppings which are completely cylindrical, about 1 cm in diameter and consist entirely of dirt and bits of insect bodies. Echidnas were recorded at 74 of the 111 sample sites throughout the SMLR during the 2000 survey. However, it was only seen at two of these. They appear to be holding their own in the area at the moment.

## Water Rat

The 13 SA Museum records of the Water Rat from within the SMLR region are heavily concentrated in the Adelaide Hills, between the Torrens and Onkaparinga Rivers. None were recorded during the 2000 biological survey, but these animals need specialised trapping techniques on the edge of suitable streams, which were beyond the scope of the survey. They are very characteristic animals with their flattened head and heavily furred tails often ending in a white tip. Again, they can sometimes be observed in the early evenings when they first emerge from their burrows into the stream to hunt their prey of yabbies, insects and bird eggs and their chicks



PHOTO: Tony Robinson

## Southern Bush Rat

Despite Morialta and Black Hill Conservation Parks having a total of five survey sites between them during the 2000 survey, no Bush Rats were recorded in either park, however sites selected there were generally not in habitat types favoured by *R. fuscipes*. Previously it has been caught in other areas of Morialta Conservation Park in good numbers, and it has also been recorded from Black Hill Conservation Park, but in low numbers. In the absence of any major fires in the area since that time, Black Hill Conservation Park should be considered the northerly limit of the distribution of *R. fuscipes* in the SMLR. Further into the ranges *R. fuscipes* was only recorded during the 2000 survey as far north as the Filsell Hill section of Kenneth Stirling Conservation Park. There appears to be a dynamic interaction going on between the native Bush Rats and the introduced Black Rat. The Black Rat is the only species found in the drier northern parts of the SMLR but in the wetter areas where there are still relatively large remnants of native vegetation Bush Rat populations persist often with Black Rats in the more degraded areas nearby.



PHOTO: Bush Rat, Tony Robinson



PHOTO: Black Rat, Tony Robinson

**Table 3: Distinguishing Characteristics of Rats found in the Sixth Creek Catchment**

| NAME   | TAIL   | EARS  | BODY FORM                        | BEHAVIOUR      | HABITAT                          |
|--|--|-------|----------------------------------|----------------|----------------------------------|
| <b>Bush Rat</b><br><i>Rattus fuscipes</i>        | Slender, naked tail, same length as head + body        | Long  | Appears 'rounded & fluffy'       |                | Bush                             |
| <b>Water Rat</b><br><i>Hydromys chrysogaster</i> | Fully furred tail to tip (sometimes white tip on tail) | Tiny  | Half the size of other 3 species |                | Near permanent water             |
| <b>Black Rat</b><br><i>Rattus rattus</i>         | Slender naked tail                                     | Long  | Long & thin                      | Jumpy & active | Common in houses, gardens & bush |
| <b>Brown Rat</b><br><i>Rattus norvegicus</i>     | Thick tail (often scarred from fighting)               | Short | Long & thin                      | Jumpy & active | Degraded creeklines              |

