



TREE-KANGAROOS

Tree-kangaroos and the kangaroos we associate with Australia both fall under the umbrella of macropods – the family of plant-eating marsupials that includes kangaroos and wallabies. Macropods used to dwell in trees, but millions of years ago they came down to live on the ground. Ancestors of tree-kangaroos eventually went back up the trees, becoming the largest tree-dwelling mammals in Australia.

Scientists believe there are 13 species of tree-kangaroos or 15 species if sub-species are included. Two species are found in Australia, but only in Queensland. The Bennett's tree-kangaroo is found north of the Daintree River, and the Lumholtz's tree-kangaroo is found further south. The remaining species are found in Papua New Guinea. Tree-kangaroos have adapted better to regions of high altitudes and therefore are found in mountainous areas.

Tree-kangaroos have several adaptations to an arboreal lifestyle. Because much of their lifestyle involves climbing and jumping between trees, they have evolved an appropriate method of locomotion. Compared to terrestrial kangaroos, tree-kangaroos have longer and broader hind feet with longer, curved nails. They also

have a sponge-like grip on their paws and soles of their feet. Tree-kangaroos have a much larger and pendulous tail than terrestrial kangaroos, giving them enhanced balance while moving about the trees. Locomotion on the ground is by hopping, as with true kangaroos.

Tree-kangaroos can leap to the ground from 18 metres up without injury. They are active in the morning and afternoon, but in areas near human settlements they are mostly nocturnal. Like terrestrial kangaroos, tree-kangaroos do not sweat to cool their bodies; rather, they lick their forearms and allow the moisture to evaporate in an adaptive form of behavioural thermoregulation.

Tree-kangaroos must find places comfortable and well adapted for breeding, as they only give birth to one joey per year. They are known to have one of the most relaxed and leisurely birthing seasons. They breed cautiously in treetops during monsoon season. This habitat leaves the joeys vulnerable as they can easily fall prey to their natural predators, amethystine pythons, which also climb and live in the forest treetops.

In many places around the world, deforestation impacts wildlife habitat. It's the same where tree-kangaroos

live. Many tree-kangaroo species already exist in low numbers and most populations are decreasing. Once common throughout the Atherton Tablelands and Daintree Rainforest, the Bennett's tree-kangaroo is now in danger due to large-scale habitat loss from agriculture and urban development, resulting in fragmented landscapes. The need for tree-kangaroos to travel across the ground means they can fall prey to dogs and cars. In addition, scientists believe that this species is under threat from predicted climatic changes that will affect important tree-kangaroo habitat.

Lumholtz's Tree-kangaroo

The Lumholtz's tree-kangaroo is named after the Norwegian explorer Carl Sofus Lumholtz (1851–1922), who discovered the first specimen in 1883.

The Lumholtz's tree-kangaroo is a distinctive kangaroo with a short, broad head, small ears, heavily muscled arms and a very long, black tail. Animals are blackish-brown with a black face and a pale band across the forehead and sides of the face; some animals have a rufous (reddish) tinge to the fur. It is the smallest of

Above: Lumholtz's Tree-kangaroo

all tree-kangaroos. Its body and head length ranges about 48–65 cm, and its tail, 60–74 m, with males weighing an average of 7.2 kg and females 5.9 kg.

Lumholtz's tree-kangaroos are restricted to rainforests between the Cardwell Range and Mount Carbine Tablelands, north Queensland. It is largely restricted to upland rainforest; animals are regularly encountered in fragmented rainforest on the basalt soils of the Atherton Tablelands. Dispersing juveniles sometimes turn up in farmland, urban areas or eucalypt forest adjacent to rainforest.

The Lumholtz's tree-kangaroo is largely arboreal – it has strong forearms and claws for climbing trees and a long tail for balance. It is also well adapted for travel across the ground, where it can hop like other kangaroos, although rather heavily. It feeds primarily on the leaves of rainforest trees and vines and often descends to the ground to move between food trees.

Females are sexually mature at around two years of age and carry their young in a pouch for around nine months. The young take another three to eight months to be weaned, after which they accompany their mother for another year or more. Juvenile males are chased away from their mothers by adult males intent on mating.

A major threat to this species in the past has been the large-scale clearing

of its favoured rainforest habitat on the fertile basalt soils of the Atherton Tablelands. Many animals still survive and breed in the tiny regrowth fragments there; however, these are threatened by domestic dog attacks and are frequently killed on roads. In the longer term, global warming poses a threat to this species. Like other leaf-eating marsupials in the wet tropics of north Queensland, Lumholtz's tree-kangaroo is a high-altitude, cool rainforest specialist.

Bennett's Tree-kangaroo

Bennett's tree-kangaroo is a larger tree-kangaroo than the Lumholtz tree-kangaroo. It is thought to be the closest tree-kangaroo to the ancestral form. Males can weigh from 11.5 kg up to almost 14 kg, while the females range between 8 and 10.6 kg. They are very agile and are able to leap nine metres down to another branch and have been known to drop as far as 18 metres to the ground without injury. Like other tree-kangaroos it has longer forelimbs and shorter hindlimbs than terrestrial kangaroos and a long bushy tail. It is mostly dark brown above and lighter fawn on chin, throat and lower abdomen. The forehead and muzzle are greyish. The feet and hands are black. The tail has a black patch at the base and a light patch on the upper part. The ears are short and rounded.

The Bennett's tree-kangaroo is a herbivore. It lives almost completely on

the leaves of a wide range of rainforest trees, notably the umbrella tree, vines, ferns and various wild fruits, in all 33 different plant species.

This very elusive (or "cryptic") tree-kangaroo is found in both mountain and lowland tropical rainforests south of Cooktown, Queensland, to just north of the Daintree River, in an area of only about 70 km by 50 km. It is also occasionally found in sclerophyll woodlands.

The Lumholtz's tree-kangaroo is primarily a solitary marsupial. During breeding when the female is in oestrus cycle, males will approach the females to breed. The Lumholtz's tree-kangaroo has a gestation period of 42–48 days. Pouch life is around nine months and weaning generally occurs between three to eight months. The joey will then make short excursions from the pouch with the mother usually following close by.

Now that it is rarely hunted by Aborigines, its main predators are pythons and the dingo.

Although the IUCN still rates the status of Bennett's tree-kangaroo as Near Threatened, its numbers seem to be increasing and its range expanding. Sightings have become far more common in recent years. The increases in numbers and range are likely because most of its range is now protected under World Heritage legislation.



Bennetts Tree-kangaroo