

# Four on the floor: down to earth with musky rat-kangaroos



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PLANTS ...

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The musky rat-kangaroo is the only rainforest marsupial known to gather and store food in leaf litter. **Left:** Although it can climb, the musky rat-kangaroo spends most of its time on the rainforest floor in a habitat that has remained stable for 120 million years.

This unusual, elusive, intriguing marsupial could be an icon for the north Queensland Wet Tropics.

It's true – it does have a distinctive scent. It also bears a superficial resemblance to an unpopular rodent. One must, however, wonder why, amongst its myriad fascinating qualities, those two features were chosen to be highlighted in its name: the musky rat-kangaroo (*Hypsiprymnodon moschatus*).

At only 500gm, it is our smallest macropod. It is also one of only two Australian marsupials that is not nocturnal (the other is the numbat).

It lives predominantly in the tropical rainforests of north-eastern Queensland, where it bounds along the ground on all four legs, foraging for fallen fruits, seeds, fungi, certain roots, and various insects. It is the only known rainforest marsupial to gather and store food in leaf litter for later consumption. Through this behaviour, it helps disperse a wide variety of rainforest plants, making the musky rat-kangaroo an important rainforest species.

Although it spends most of its time on the forest floor, often using a series of paths amongst the roots and trees, the musky rat-kangaroo also climbs with ease, using its prehensile tail, opposable big toe of its hind foot and the tough gripping skin on its foot pads, to help it along.



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Musky rat-kangaroos will feed in small groups during the day, but are generally solitary. **Right:** As a rainforest-dependent species, the musky rat-kangaroo is threatened by activities that reduce the area and connectivity of its habitat.

Its current area of distribution, in the wet tropics of far north Queensland, has been stable for at least 120 million years. The species has needed little evolution in order to keep up with environmental changes and is thought to be the most morphologically primitive member of the macropod family. It is in many ways similar to possums.

Females give birth to two, and sometimes three, young. The joeys stay in their mother's pouch for around 21 weeks, after which they will spend some time following her around while she forages on the rainforest floor. Each adult constructs its own sleeping nest, collecting leaves with its front paws and mouth, transferring them to its prehensile tail and placing them between the buttress roots of a large rainforest tree. During the day it is generally solitary but will feed in a group of two or three.

### Picture the territory

I have wanted to photograph this unusual macropod for some time. My opportunity finally arose during a recent trip into its territory. I had heard about a rainforest property in Julatten, in the Atherton Tablelands of far north Queensland, where the owner of the property has ensured the absence of feral predators such as wild dogs. Whether they catch and kill these small marsupials or stress

them by chasing them, their effect is detrimental. The owner has also spent a lot of time letting the rat-kangaroos become used to his presence. This has created an ideal situation for someone who wants to photograph them.

I had spent some time walking through the rainforest without a sign of my quarry. Little light penetrates to the rainforest floor, so the chances of my getting a decent photo of it were low. But I persevered until I became aware of something dark scuttling about the leaf litter. It was a feeding group of rat-kangaroos.

I crouched down and slowly pulled my camera from my backpack. The animals were lively and I knew they could move quickly if startled. Focusing on an individual, I composed my first shot, but before I had even pressed the shutter button, the animal had dashed out of frame.

I decided just to enjoy the rat-kangaroos at close range. It was lovely to see them foraging on the leaf-littered floor, feeding and interacting with each other. I became so engrossed that I didn't at first notice one individual standing on a mossy log off to one side of the feeding group. As I remained perfectly still low, grey clouds moved in, blocking the patches of sunlight reaching the ground and diffusing the light over the log and

rat-kangaroo. Perfect conditions for photography! Gently raising my camera, I focused on the rat-kangaroo, and captured a series of photos. With my goal achieved, I kept watching the animals until they bounded off into the undergrowth.

The musky rat-kangaroo lives in coastal and tableland rainforests from sea level to altitudes of more than 1000m, and is reasonably common in tropical North Queensland. However, it is a rainforest-dependent species. Where rainforest is cleared for residential and agricultural purposes, the musky rat-kangaroo is threatened not only by reduced habitat but also by loss of connectivity. Currently, it appears to be secure in protected areas, especially within the World Heritage-listed Wet Tropics, but its continued survival relies on maintaining this protection.

I feel very privileged to have spent time with these unusual and delightful marsupials.

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