



Bush Buddies

Volume 3

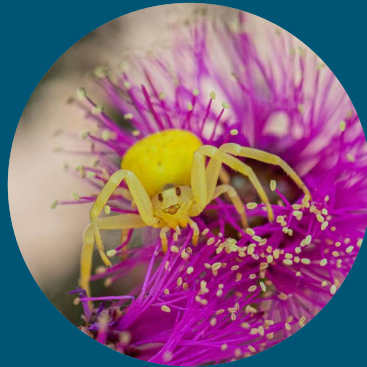


BUSH HERITAGE
AUSTRALIA

Did you know?

Flower Spider

This happy looking creature is a Flower Spider, snapped out at our Kojonup Reserve in Western Australia. This family of spiders is actually pretty common through much of south and eastern Australia, but rarely seen. It depends on camouflage to catch its prey by sitting still and waiting.



Flower Spider, Kojonup Reserve WA.
Photo Nic Duncan

Goannas

Did you know goannas belong to an ancient lineage that evolved in the northern hemisphere during the Cretaceous period – about 90 million years ago! Today the Perentie (which can grow over 2m long) is Australia's biggest goanna, but there was once a giant (*Megalania prisca* or *Varanus priscus*) more than three times this size!



Goanna, Cravens Peak QLD.
Photo Steve Heggie

Honey Possums

These tiny creatures are only distantly related to possums and don't actually eat honey! Instead they're the world's only nectar-eating marsupials! Like a Hummingbird, the Honey Possum's tongue moves rapidly in and out of the mouth (at about three times a second) collecting nectar and pollen from native flowers, where it lives in south-west Western Australia.



Honey Possum, Western Australia.
Photo Ross Bray

Burrowing Bee

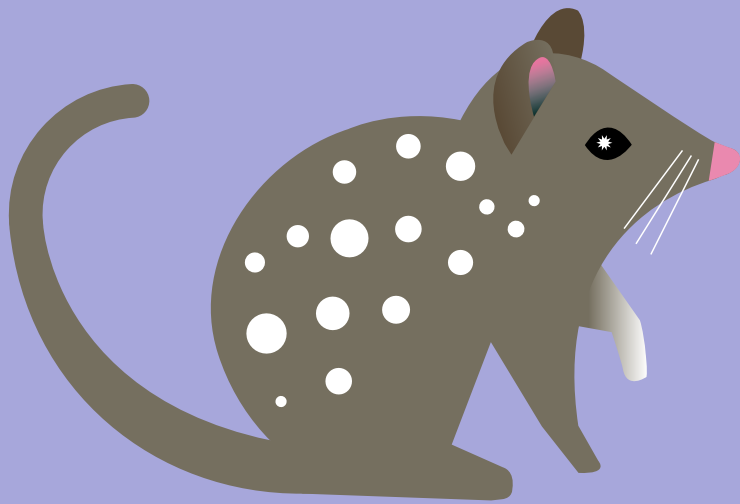
Australia's home to an estimated 2,000 native bee species, which all have an important job pollinating plants by collecting nectar and pollen from the flowers and distributing it around. Once spring is over and the bees have done their pollinating, some solitary species like the Burrowing Bee (pictured) dig their own burrow by biting the soil. They stock the bottom of the burrow with nectar and pollen, and deposit their eggs. Once hatched they dig their way to surface to start a new cycle the following spring.



Burrowing Bee, Charles Darwin Reserve WA.
Photo Vanessa Westcott

Learn more about Australia's wonderful wildlife.
Visit [BushHeritage.org.au/species](https://bushheritage.org.au/species)

Spot the difference



Northern Quoll
(*Dasyurus hallucatus*)

- The smallest quoll (size of large kitten)
- Grey-brown/brown fur
- Large white spots
- Unspotted tail



Eastern Quoll
(*Dasyurus viverrinus*)

- Delicate build
- White-spotted black/fawn fur
- Plain tail, sometimes with a pale tip

Attracting lizards to your garden

Wherever you are in Australia, in the warm summer weather, chances are there are lizards that you could encourage into your garden. Skinks, dragons, geckoes and blue-tongues all make great neighbours - not only will they protect your garden by eating up insects, some can take care of slugs and snails as well.

Sunshine and shade

They need somewhere to hide, insects to eat and some nice sunny rocks to warm themselves up on or under. Lizards are cold-blooded and love to bask in the sun to get energy, or hide under rocks that stay warm through cold nights. (Rocks warm up in the sun to provide extra heat.)



Somewhere to hide

Plant native grasses and mulch your garden with leaf litter. You'll also need to include some rocks, large bits of bark or logs for shelter. If you don't have any, don't collect them from local bushland (where they're already providing good habitat). You can substitute some pieces of PVC pipe or leave some stacks of old bricks, tin roofing or old tiles to hide under.

Finally, make sure there are no local cats on the prowl and be sure to check for lizards before mowing the lawn!

Something to eat

By spreading leaf litter and composting your veggie scraps, you'll attract insects and snails for lizards to eat. Groundcovers with berries make an extra treat. Provide some water in a shallow bowl and in a protected area with shelter nearby. If you include some sticks or rocks as a ramp so it's easy to scuttle in and out, you won't have to worry about any creatures getting trapped in the bowl.

No poison

Be sure to avoid using chemicals such as pesticides. Lizards can get poisoned if they eat a poisoned insect and if you get rid of all the insects with pesticides, lizards will have nothing to eat. Controlling insects is part of their job!



A wild Eastern Blue-tongued Lizard that has moved into a garden between some apartments in Fairfield, Victoria.





Ask an Expert: Migratory Birds

Oli asked:

Hi guys. I'm Oli and I've got a few questions about Australian Migratory birds.

What are some different types of Australian migratory birds?

Why do they fly so far?

Do they stop on their way?

Do you have nature questions that you'd like answered by our team of ecologists and other experts? Send them to communications@bushheritage.org.au or better still, make a video question and tag us on one of our social media channels. We have answers!



Liz:

Wow, great questions. In Australia we have heaps of migratory birds. The shorebirds are the ones that come from places like Siberia, like the Great Knot. They travel 5,400km – that is a long way! And they do that twice a year. They go down to Australia for summer and they go back.

We have other migratory birds that migrate within Australia, like the only two migratory parrots in the world - the Orange-bellied Parrot and the Swift Parrot, and they migrate between Tasmania and Victoria. Then we have others like the Rainbow Bee-eater, which migrates from New Guinea to Northern Queensland and down to the southern states for summer.



Why do they migrate?

Well, because they're looking for better conditions - for breeding and just for living, for eating and for raising their young. So, when it gets really cold in Siberia, up in Northern Russia, they decide 'This is a bit hard for us, so we'll go right down to Australia'. And they use the Great East Asian-Australasian Flyway, which goes all the way along the rim of the Pacific.

Do they stop?

Yes, they do. They need to stop and have a rest and have some food and a break from their flying. But all the places along the way and the coastlines on the places they visit are very important habitat for them.



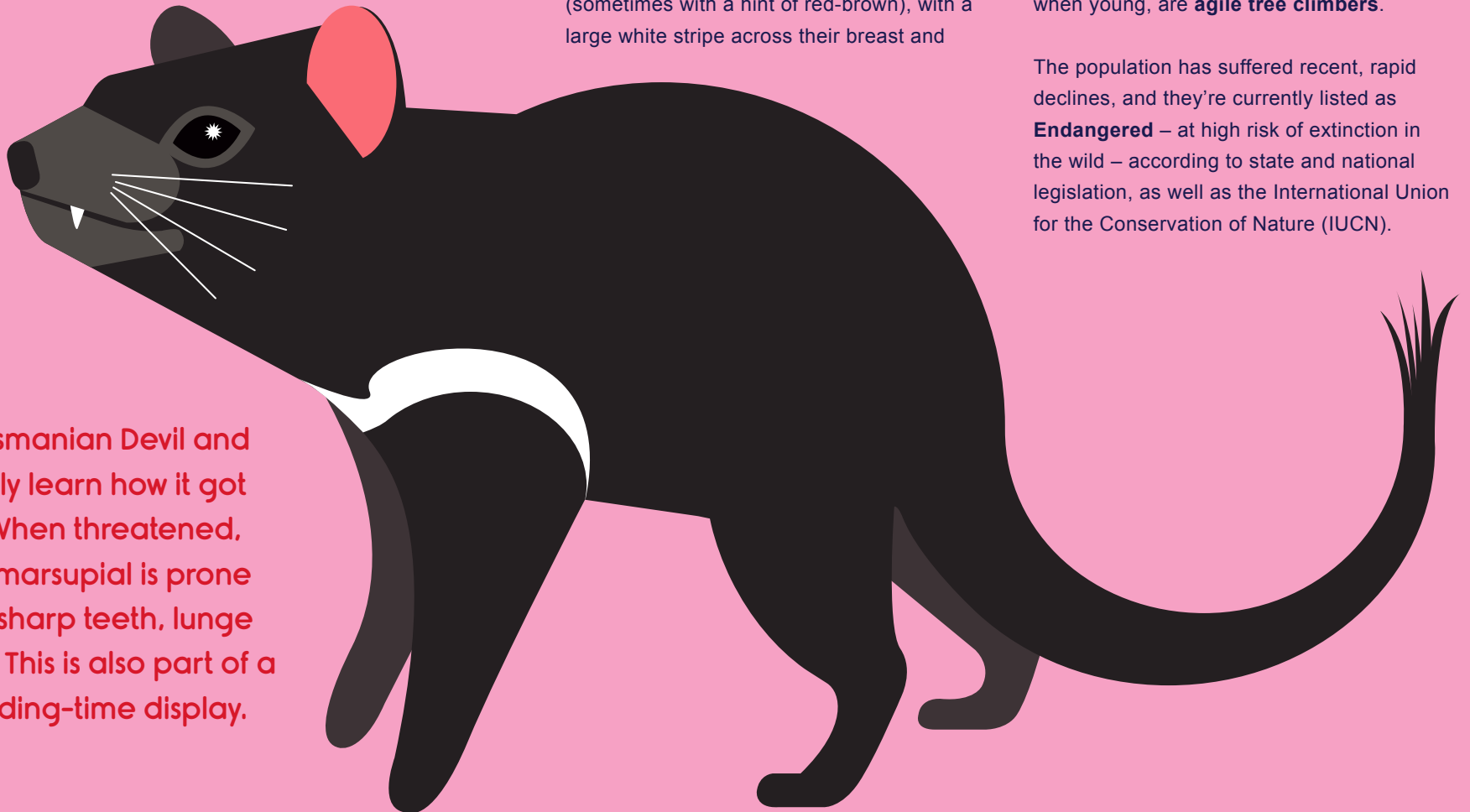
Rainbow Bee-eater.
Photo by Alec Brennan

Tasmanian Devil

(*Sarcophilus harrisii*)

The largest carnivorous marsupials in the world and, for their size, they have one of the most powerful bites of any mammal!

Upset a Tasmanian Devil and you'll quickly learn how it got its name. When threatened, this stocky marsupial is prone to bare its sharp teeth, lunge and growl. This is also part of a typical feeding-time display.



It was this late-night, 'otherworldly' howl, heard by early European settlers, which led to its common name.

Tasmanian Devils are the **largest carnivorous marsupials** in the world today; they're the size of a small dog, weighing 4kg to 14kg, and standing about 30cm tall.

Devils have dark brown to black fur (sometimes with a hint of red-brown), with a large white stripe across their breast and

the odd spot on their sides. Their faces are compact, with long whiskers, dark eyes and pink on the inner ears.

Like other marsupials, such as Antechinus, they store fat in their tails in times of plenty, to draw on when food is scarce. Their legs are stocky and powerful. With front legs longer than hind legs, they walk a little like a pig. Surprisingly, Tasmanian Devils, especially when young, are **agile tree climbers**.

The population has suffered recent, rapid declines, and they're currently listed as **Endangered** – at high risk of extinction in the wild – according to state and national legislation, as well as the International Union for the Conservation of Nature (IUCN).

Where do Tasmanian Devils live?

Once Tasmanian Devils were found all over Australia. It's possible that the introduction of the Dingo in pre-European times led to their extinction on mainland Australia.

They now inhabit most of Tasmania, though they prefer forests and coastal scrublands. Here they create dens in hollow logs, under rocks, in wombat burrows and in caves.



Tasmanian Devil behaviour

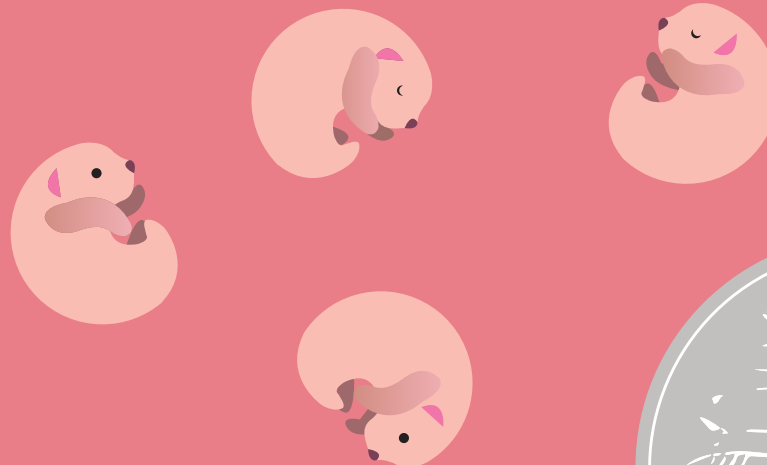
Primarily **nocturnal**, **carrion (dead animal) eaters**, Tasmanian Devils can **travel up to 16km per night** to find a carcass or other source of food. They can also be predators, eating small birds, snakes, fish and insects.

Typically solitary, a carcass is one of the few things that will bring them together communally. Fighting always ensues, as individuals jockey for position.

They certainly don't waste food, eating the bones, hair, organs and muscle of the carcass. They'll even eat spoiled or rotting meat.

Devils mate once a year. The female will give birth to more than 20 rice-grain sized young, but given she has only four teats only a few will survive. Being a marsupial, the teats are in the female's pouch, where she suckles the young for four months.

She then carries them on her back for another few months, and they're fully grown at nine months. Tasmanian Devils **can live five to eight years**, though in the wild it's rare to find any older than three or four years.



A Tasmanian Devil with carcass.
Photo Bruce Thomson.



Threats to Tassie Devils

In the 1800s there was a concerted effort by Tasmanian farmers to eradicate the species, which were thought to kill livestock. While they're unlikely to take sheep and larger stock, they do take poultry and clean up carcasses of dead stock.

While thousands of Tasmanian Devils were killed, thankfully they didn't suffer the same fate as the **Tasmanian Tiger**. Devils are now a protected species, but their survival is threatened by something far more insidious.

Devil Facial Tumour Disease (DFTD) is a contagious disease discovered in the mid-1990s. Individuals pick it up through fighting and mating. Lumpy tumours form around the head and neck, growing rapidly so that the animal finds it hard to eat.

An individual can die of starvation within six months of symptoms showing. Tens of thousands of Tasmanian Devils have died from DFTD, and it's this ongoing outbreak that has caused the species to be classified as Endangered under Australian and Tasmanian legislation.

Unfortunately, Tasmanian Devils are also often struck by vehicles when they're on the side of the road eating carrion that was itself the result of a collision.

While they have few natural predators, eagles and quolls may predate on the young. **Habitat destruction** adds another stress to the species' persistence.



Rowena Hamer, a University of Tasmania PhD Candidate, conducting research with devils in the Midlands. Photo Cesar Peñaherrera Palma.

What's Bush Heritage doing?

We have devils on all our Tasmanian reserves: **Friendly Beaches, Liffey Valley Reserves, South Esk Pine** and on **Tasmanian Midlands partnership** properties, though DFTD is present in these areas.

We protect the species' habitat and manage feral cat populations, which compete with devils for food. We're also working to reduce speed limits around our reserves.



A vocal Tasmanian Devil. Photo Steve Parish.



Science experiment: How do rainbows work?

There's nothing so welcome on a hot day as summer rain. And where there's sunshine and rain together it usually means a beautiful, clear rainbow!

Why? Let's find out by making a rainbow of our own.

What you'll need:

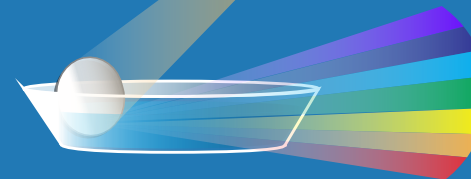
- A dish of water (not too deep)
- A small mirror
- White paper
- A sunny day

Procedure:

1. Place the mirror in the dish of water so that the sun shines onto it
2. Hold up your sheet of white paper facing the mirror and adjust position until a shimmering rainbow appears on it.

How it works:

When sunshine hits water drops they actually act much like a mirror. White sunlight is split up into the different colours of the rainbow. But you can only see a rainbow if the sun is behind you and you're facing the rain.

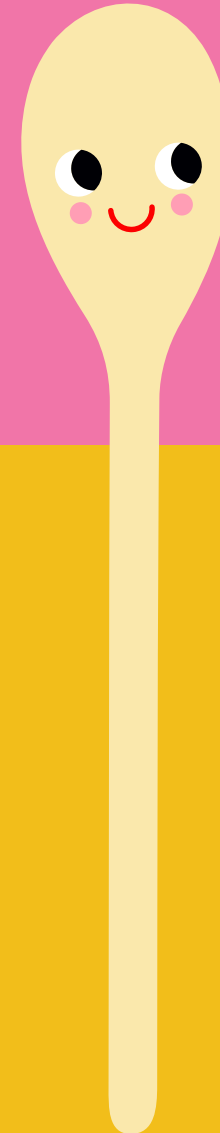




Bush tucker basics – making damper

Exploring, hiking or camping in the bush is a sure way to build up an appetite. There are loads of delicious foods you can cook over an open fire but one of the simplest and best known to make is damper.

It's so easy, everyone can have a go, and cooking on an open fire is fun.



Ingredients:

- Self-raising flour (1 cup or around 500g)
- 1 teaspoon sugar
- ½ cup of milk
- Pinch of salt
- 1 tablespoon of butter
- Butter or jam to enjoy with it.

Method:

- Rub the butter through the flour until it's all crumbly.
- Then mix in the salt, sugar and milk until it forms a dough of nice consistency.
- Poke it onto a stick or roll into a snake shape and wind around a stick.
- Cook over an open fire and add butter or jam to taste!



Safety: Please be sure you have an adult helper when around a campfire. (And adults, be sure to follow advice around Total Fire Bans and declared Fire Danger Periods.)

Yikes! Is that a Koala in your kitchen?!

All around the world, animal lovers have been having lots of fun viewing and interacting with animated, 3D animals through Google. Create your own photos and videos with Aussie animals to surprise your parents or friends.



Here's how it works:

- Simply search Google on an Android or Apple device for one of the eight featured Aussie animals (these are Echidna, Emu, Kangaroo, Koala, Kookaburra, Platypus, Quokka and Wombat).
- In the search results choose to 'View in 3D' to see (and hear) your favourite animated animal.
- You'll also see an option to 'View in your space'. Choose this and you can take your own photos and videos with your favourite species, right in your own home or backyard.

If you take any photos or videos, tag us on social media or send them into communications@bushheritage.org.au to share the fun.

Free Zoom backgrounds

Whether it's chatting with your grandparents or cousins far away or keeping in touch with a sports team, scout group or online lessons, many of us have done plenty of video calls in 2020.



Now you can choose a beautiful image from our conservation reserves as a backdrop.

Stand in a storm on our Boolcoommatta Reserve, or as the sun sets over a wetland on Naree. Have your head in the towering canopy of Fan Palms from the wet tropics of far north Queensland or chat away to your friends with a Green Possum curled up right behind you!

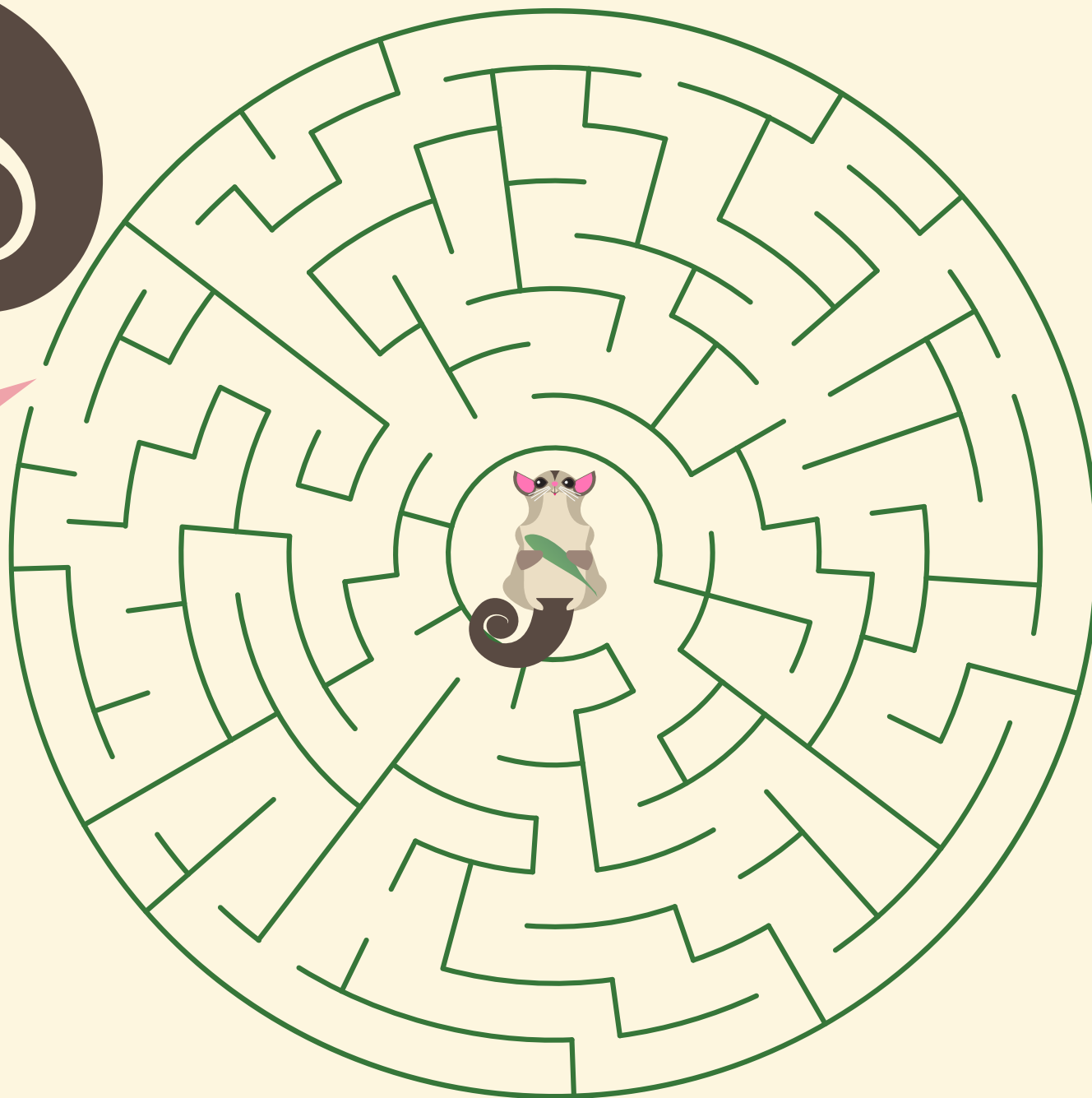
Simply visit [BushHeritage.org.au/Zoom](https://bushheritage.org.au/Zoom)



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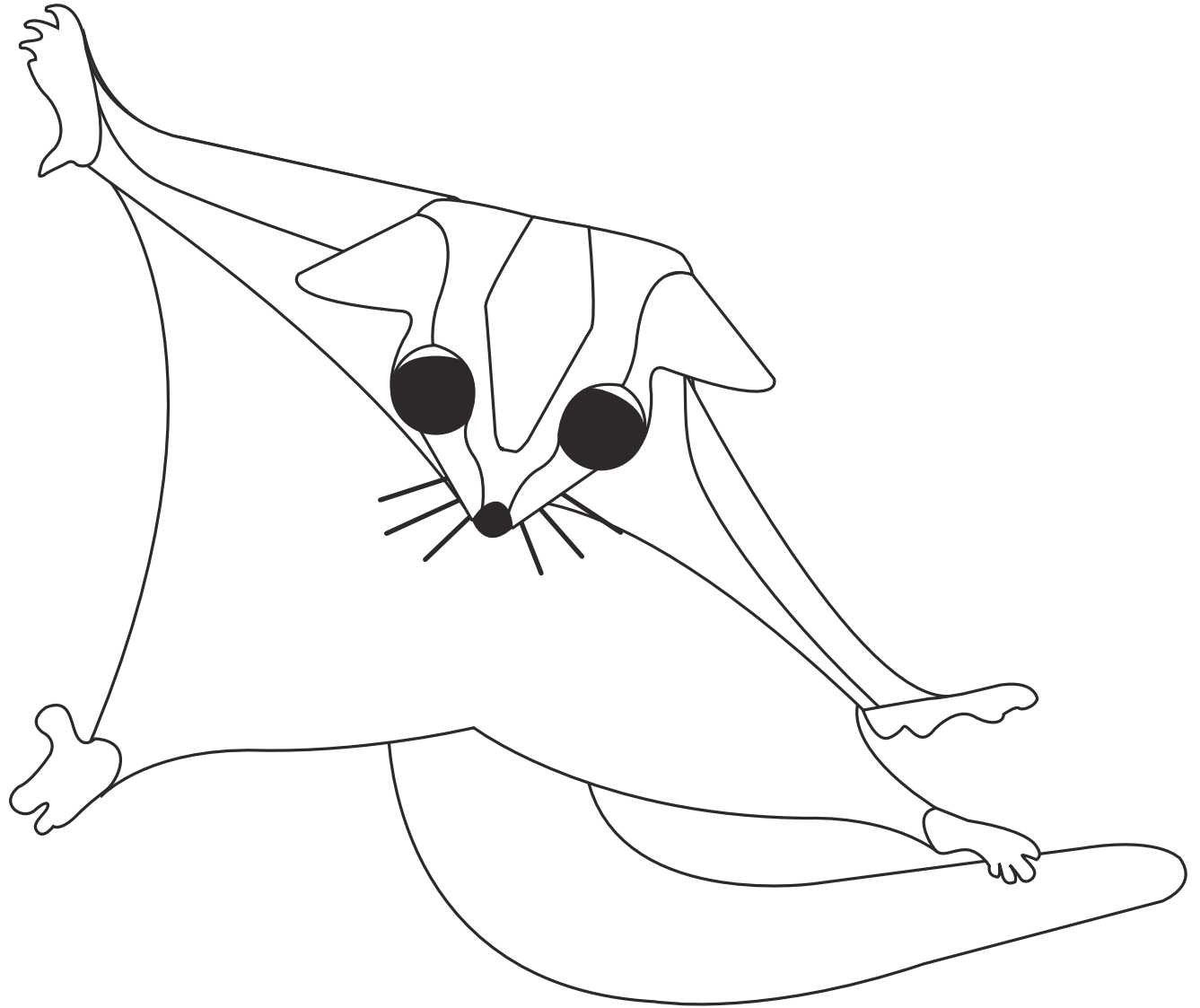
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Use this maze to help
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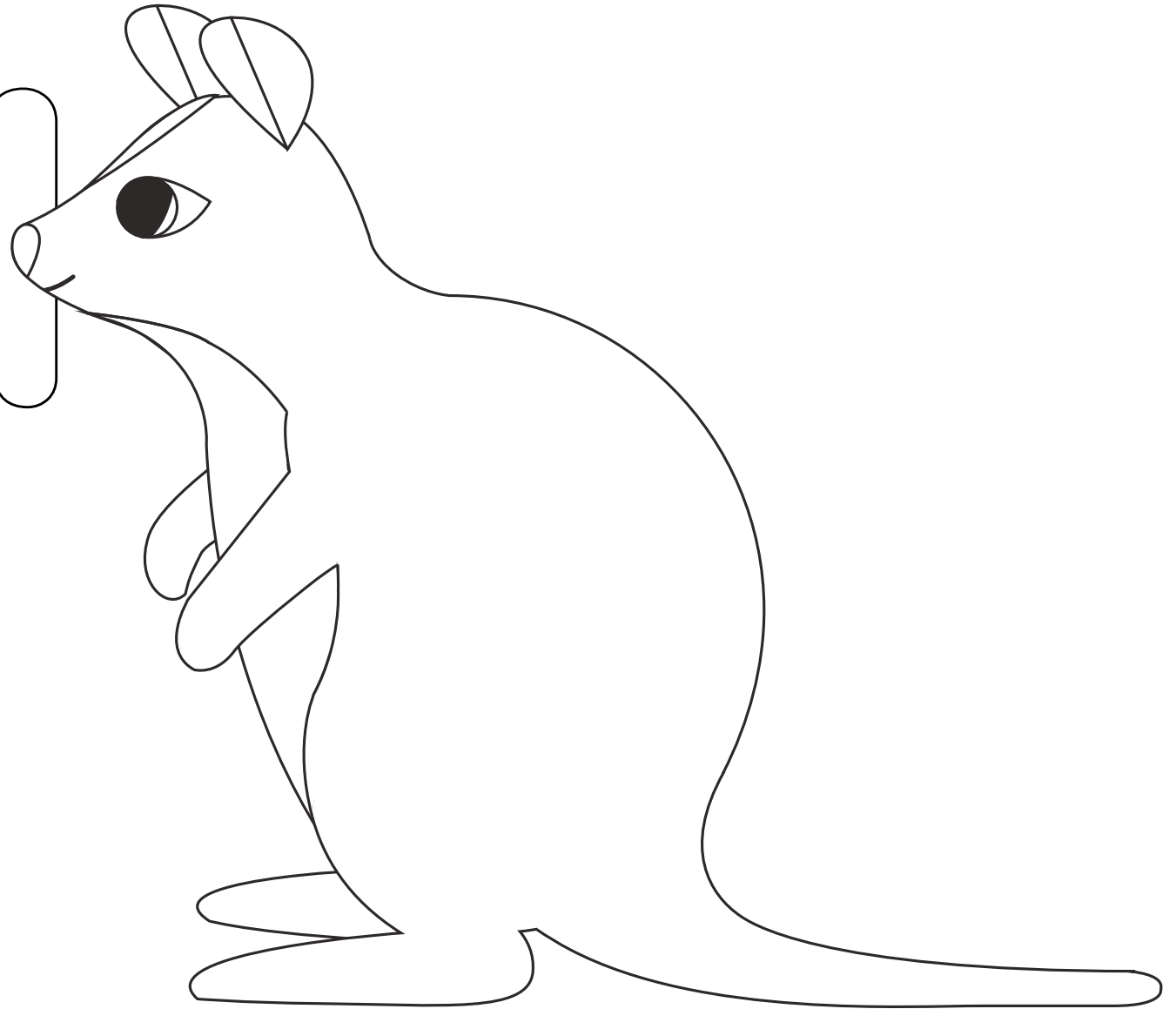
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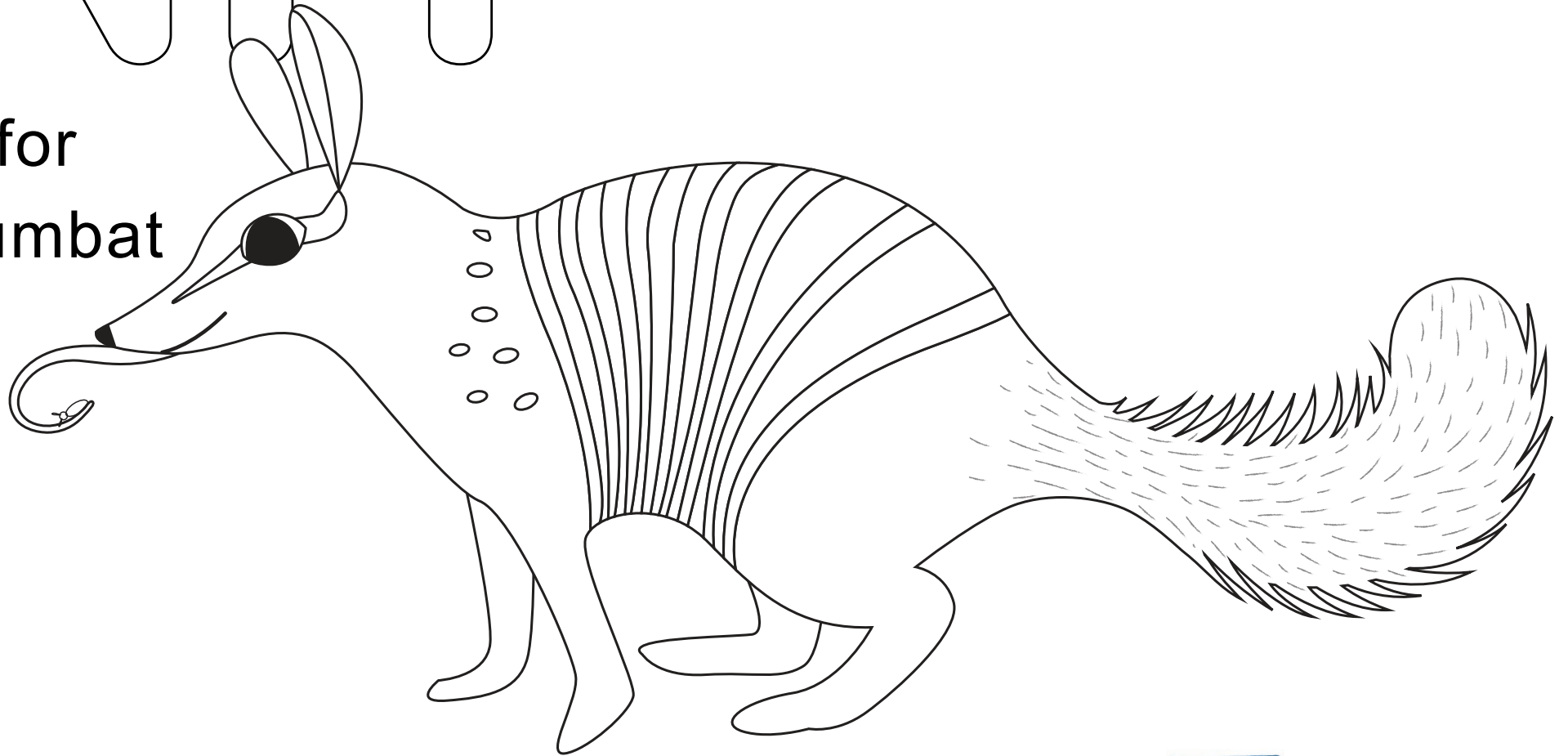
is for
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