



Bush Buddies

VOLUME 7



BUSH HERITAGE
AUSTRALIA

How far can a kangaroo jump?

Australia has lots of different kangaroo species and wallabies too, which are all part of the same family.

They all have strong back legs to jump with and long tails used for balance, but the biggest and strongest of them all is the Red Kangaroo, which can grow to 6 feet tall and weight 90kg.

These big, strong kangaroos can jump about 25 feet, which is nearly 8 metres (that would be over 4 very tall people lying head to toe).

The Guinness Book of Records says the longest jump recorded was measured by a female Red Kangaroo found in NSW in 1951. After being chased it recorded some huge hops, including one measuring 12.8 metres (which is about as long as a bus)!

How far can YOU hop?



Kangaroo, QLD/Pilungah (Cravens Peak)
Photo Eve Jani.

Word search

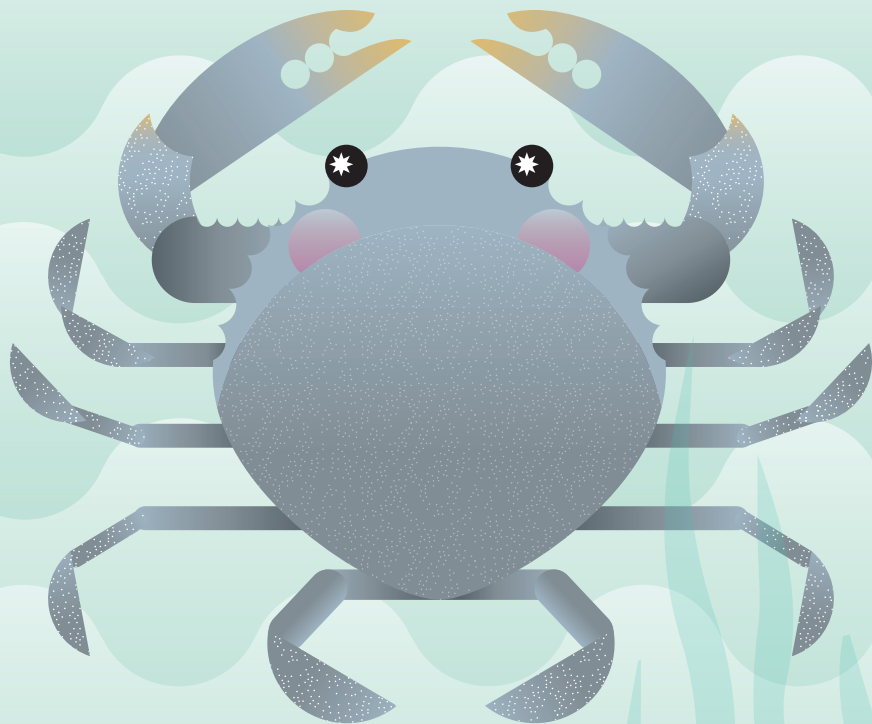


Summer can get super hot in some parts of Australia. But did you know there are plenty of animals that like to live in hot habitats? These are our desert dwellers.

Often in the day time, when temperatures soar, the only sign of them will be tracks in the sand. But as the temperatures cool at night many emerge from their burrows and homes to search for food and water.

- THORNY DEVIL (a harmless ant-eater)
- NIGHT PARROT (a rare bird, thought extinct for 100 years)
- WOMA (a rare desert python)
- GREY FALCON (a rare native raptor)
- HOPPING MOUSE (a true mouse with a powerful jump)
- BILBY (Australia's answer to the Easter Bunny)
- MARSUPIAL MOLE (blind, blonde sand swimmer)
- GRASSWREN (elusive little birds)
- PERENTIE (our largest goanna)
- MULGARA (small but fierce marsupial carnivore)

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Got questions about Aussie animals, plants or life in the bush? Send them in and one by one we'll find you answers.

Communications@bushheritage.org.au

[Bushheritage.org.au/bush-buddies](https://bushheritage.org.au/bush-buddies)

Or find bush Heritage on



Match joke to punchline

Q. How do you know the ocean is friendly?

Q. What kinds of tree fits in your hand?

Q. Why did the crabs blush?

A. Because they 'Arrrgh!'

A. Mussels

A. It waves

A. Because the sea weed

A. Pick a cod, any cod

A. A Palm Tree

Q. What are the strongest creatures in the ocean?

Q. Why are pirates called pirates?

Q. What did the magician say to the fisherman?

Knock Knock

Who's there?

Water

Water who?

Water you waiting for?

Open the door!

Protecting country with fire

By Danika Davis

The Kimberley is a region spread across the top left corner of Western Australia. In Winter, it can be quite hot in the day, but the skies are clear, and many visitors arrive to explore some of the country's more remote and beautiful sites.

In the Kimberley's north-west, the Wunambal Gaambera people are the Traditional Owners of an area of land and saltwater known as Wunambal Gaambera Country. They call everything in their country their *Uunguu*, meaning 'living home', and it's about twice the size of Sydney.

It is vast and full of savanna grasslands, hills and rocks. You will find some very special animals in Wunambal Gaambera Country. Like the *Monjon*, the smallest rock wallaby in the world.

Rainforests big and small grow near the rivers, which have cool, fresh-water swimming holes and waterfalls. One of them is famous. Tourists know it as Mitchell Falls, but its Wunambal Gaambera name is *Punamii-Uunpuu*.

This place is so precious that, ten years ago, it was named as the Uunguu Indigenous Protected Area. Wunambal Gaambera people control how it's looked after. That's a good thing, because they know how to look after it better than anyone else.

Because it does not rain much from April to October, the grasses and leaf litter can dry out and become fuel for big damaging wildfires, which is bad news for the people, animals, places and rainforests.

So, during *Yurrma* (the early dry cold season April-June), Wunambal Gaambera people set out to protect country from the harsher, hot months (September – November) before the monsoon (wet season) rain comes. One of the ways they do this is by burning the ground in patches with fire. That might seem like an odd way to protect something, but they have a very special, old way of using it. These days, they combine their traditional ways with new technologies, like helicopters and satellite mapping, and call it right-way fire. It keeps fire in control and does not harm any people or animals.

As part of their right-way fire, the Uunguu Rangers and young Traditional Owners from the area set out every year in June to live in the bush and do this important job. They do traditional burning while walking. They also record things they see, like animals and plants, and map out the area. Sometimes they find their ancestors' paintings in rock shelters which is exciting. They are very proud of these sites. Sometimes, they discover new species or find out that a type of animal is doing better than before. This tells them that they're doing a good job.

One of the Rangers, Jeremy Kowan, explains that "burning, we can feel our old people, they would be proud of us. We are protecting our art sites. Being out on country, our old people are looking out for us, they are there protecting us."

Then, when they're done, there is less fuel on the ground for wildfires started by lightning, which happen in the harsh, hot season.



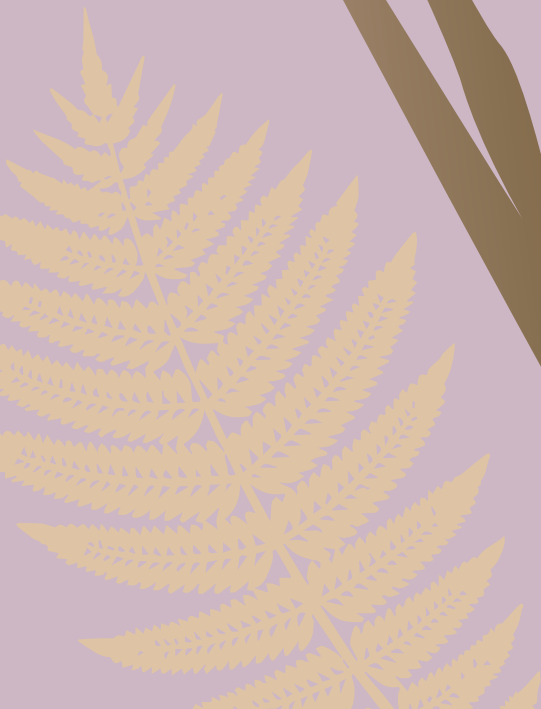
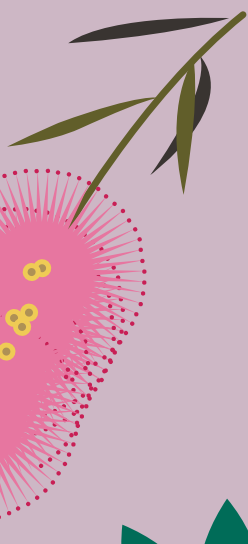
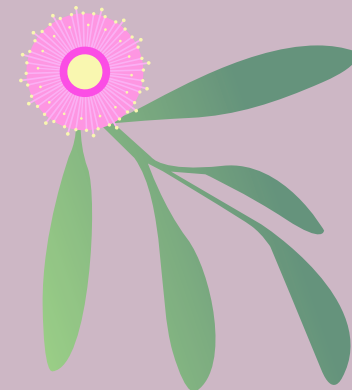
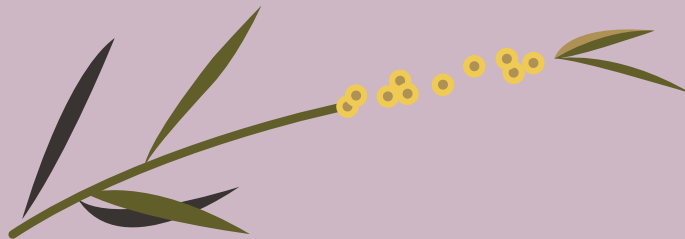
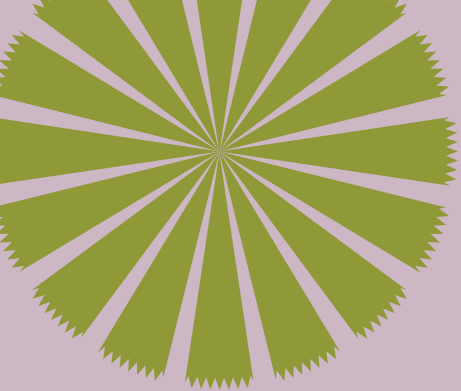
Making bush huts

Building is engaging – whether it's with Lego or with Minecraft, young minds have always loved to design and construct. When it comes to engaging with nature in real life, there's no better and deeper way to engage young kids than to build a bush hut or shelter.

- They'll engage deeply with their surroundings looking for the right sticks, bark or other material
- Brains will need to be in gear to figure out the engineering needed to hold everything together
- Teamwork will be tested. Kids will need to negotiate the best designs or ideas.

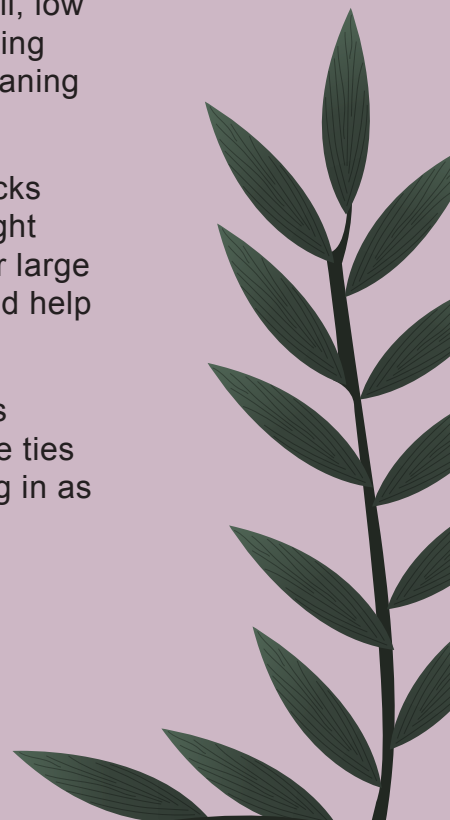
NOTE:
be sure you're
not taking another
creature's habitat





There aren't really any rules or recipes for building a hut. But if you're not sure where to start, here are some ideas:

- Look out for suitable sites. Trees with hollows, hedges that might form a wall, low branches that could be used as a ceiling buttress or forks that could hold up leaning branches.
- Search for materials. Good length sticks or fallen branches are useful. You might have sheets or strips of candlebark or large leaves (from ferns or palms) that could help line your walls.
- Depending where you are, and what's available, a hessian bag or some rope ties might be useful extras you could bring in as building supplies.



Echidna

(*Tachyglossus aculeatus*)

Meet the echidna - Australia's most widespread native mammal. Along with the Platypus, echidnas are monotremes - which are the only mammals that lay eggs.

Did you know a baby echidna is called a puggle? Or that adult echidnas make 'snuffling' noises when they hunt for food? There's a lot to like about the **Short-beaked Echidna**.

This waddling, well-camouflaged mammal is a very peculiar creature.

While the Short-beaked Echidna is widespread in Australia, Long-beaked Echidnas are no longer present.

Three species of Long-beaked Echidnas and the Short-beaked Echidna are all found in Papua New Guinea.

Short-beaked Echidnas can grow up to 40cm and 7kg, but most are between 2kg and 5kg. Their Latin name means 'quick tongue' and 'spiny'. There's good reason why their other common name is the **Spiny Ant-eater**.

Their snouts are rigid and strong, allowing them to break open logs and termite mounds. Echidnas then slurp up ants and other insects with their sticky, saliva-covered tongue, which can be 17cm long!

Echidnas have a very keen sense of smell, useful in locating mates, detecting danger and snuffling for food. Their short limbs and shovel-like claws are perfect for digging out food and burrowing in the soil. Males also have a spur on each hind leg though, unlike the Platypus, it's non-venomous.

Instead, they use their hard, sharp spines for protection. Below these 5cm-long spines, echidnas are covered in short black hair, helping them to live in a wide variety of habitats.



Where do echidnas live?

Echidnas may be shy and infrequently seen, but they're found across most of Australia and hold the title of **Australia's most widespread native mammal**.

You can find echidnas slowly wandering around most habitats, from deserts to rainforests and alpine mountains. To survive extremes in weather echidnas burrow into the soil, hide under vegetation and shelter in hollow logs, rock crevices and in burrows created by wombats or rabbits.

Amazingly, echidnas are good swimmers. They've been seen crossing rivers and beaches with their snouts in the air like snorkels!

Echidnas are solitary, wanderers: they have large, overlapping home ranges (up to 50 hectares) and only maintain a fixed address when rearing their young in a burrow.



A baby echidna on our Scottsdale Reserve. Photo Kim Jarvis.



A group of echidna in the Tasmanian Midlands. Photo Matt Appleby.

Echidna behaviour

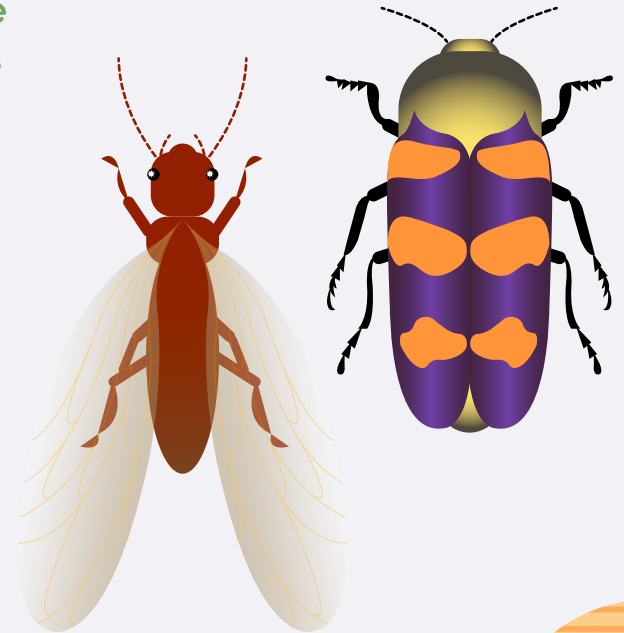
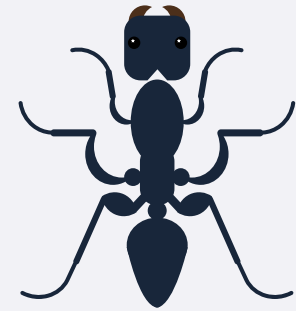
How do you know when echidnas are breeding? Just look for a female being trailed by one to ten males. This can last for weeks at a time.

While it doesn't sound romantic, the female will eventually mate with the male that, through sheer tenacity, follows her longest!

The female will then lay a single, leathery egg. Only 0.16 cm long, this tiny egg is incubated in her pouch. When the egg is the size of a jellybean, the young echidna – the puggle – hatches from the egg. It's then carried in the mother's pouch for about three months, where it suckles on her mammary glands. The puggle leaves the pouch when it grows spines, at about three months old. Young stay and suckle from the mother until they're weaned at about six months of age.

Adult echidnas eat ants and termites, and sometimes feast on earthworms, beetles and moth larvae. Without teeth to chew their prey, they grind food between their tongues and the bottoms of their mouths. Their tongues are so sticky and effective that they accidentally consume a lot of dirt while feeding, which is why their droppings are laced with soil.

Echidnas typically live up to 10 years in the wild, but have been recorded living 49 years in captivity.

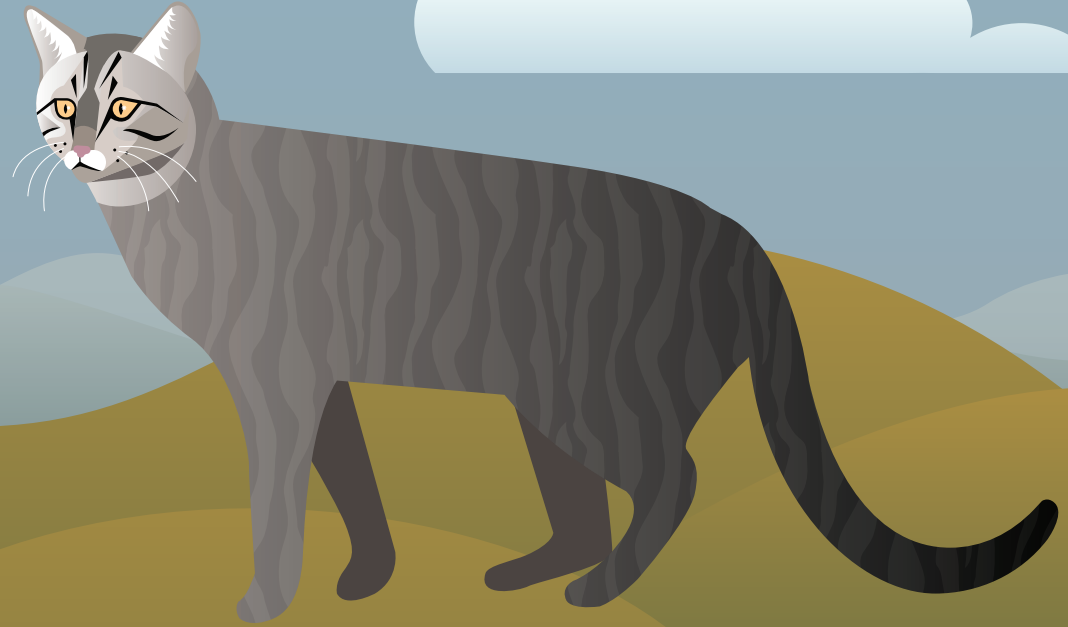




A Short-beaked Echidna drinking from a stream. Photo Steve Parish.



A baby Echidna is called a puggle. Photo Steve Parish.



Threats to echidnas

The primary threat to echidnas is habitat loss, especially the loss of fallen logs and tree stumps, and protective understorey vegetation. As they move so slowly they're also vulnerable to being hit by vehicles.

What's Bush Heritage doing?

Echidnas occur on most of our reserves. Liffey Valley is home to the Tasmanian subspecies, which has a particularly furry coat to survive the cold. We protect the habitat of echidnas by conserving native vegetation and hollow logs, managing total grazing pressure and easing predation by controlling feral animals such as cats and wild dogs.



Make your own sundial

Do you ever lose track of the time while playing outside? Some experienced bush lovers can tell the time by looking at the position of the sun. In fact, measuring the position of the sun is how measuring time began.

Let's use the sun to make our own outdoor clock - a garden sundial!

You'll need:

- A nice straight stick
- 12 rocks or sea shells (or some chalk)
- A place in your backyard that gets some sun.



Instructions:

- The first thing to do is set your stick in the ground pointing straight up to the sky. If you don't have soft ground, an umbrella stand or some old bricks might hold a stick in place.
- On a sundial this pointer is called a 'gnomon' (which comes from the Greek word to measure or examine). Your stick should be casting a nice clear shadow when the sun is out. Can you guess which way the shadow is going to move?
- The numbers on our clock can be stones or shells, scratches in the dirt, or chalk in your driveway. Painting stones or shells with numbers can be lots of fun.
- Next, simply use your clock to set an alarm on the hour and go out to mark the spot where the shadow points.
- Now instead of running inside to check the time, you can run out into the garden!

Once the hours are marked out, the clock will be fairly accurate for a few weeks but will change over time as the earth's tilt changes the sun's position in the sky. This could be a great introduction to talking about seasons and the earth's orbit.

Can you predict how the clock will change?



Summer night bug blitz

Our scientists spend a lot of time learning about which animals and plants live in the bush and how they are going. No creature is too small to be included, even little bugs. Insects are very important in nature, they play a role in pollinating plants and are part of the food chain, eaten by birds, reptiles and other animals.

Warm summer nights are a great time to find out which insects live around your home. To find out, we can set up a Light Trap.

What you'll need:

- A clothesline
- A white sheet to hang on it (and pegs)
- A bright torch to shine on the sheet.





Moths, flies and many other flying insects are attracted to light and will be drawn to your sheet where you can get a good look at them.

How many different insects can you find?



Nikolai Tatarnic (Curator of invertebrates, WA Museum) and Paige Maroni (Nik's Phd student) blitzing for bugs at night using a bed sheet and UV light.
Photo Annette Ruzicka.

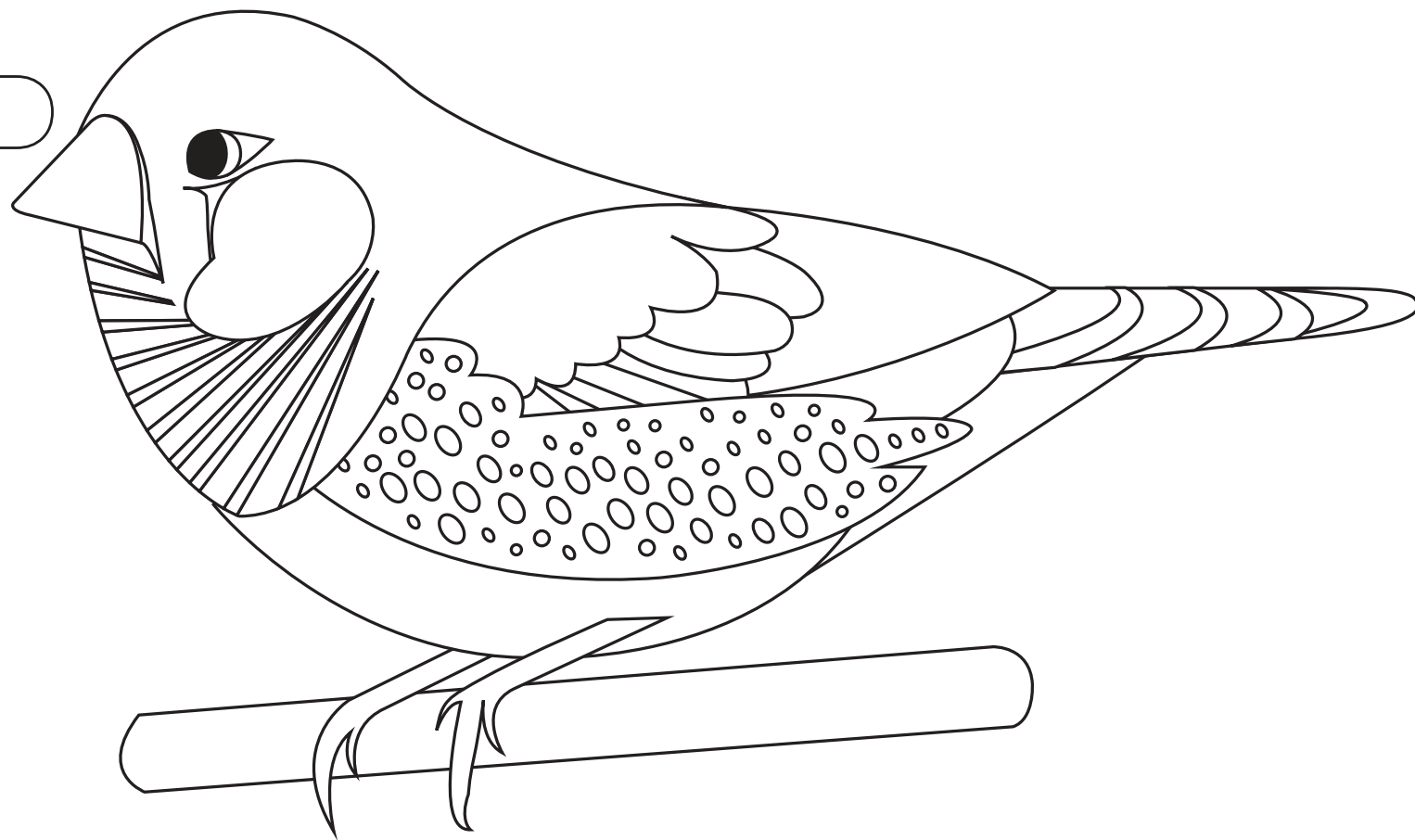


Moth Survey, NSW/Scottsdale.
Photo Suzi Bond.

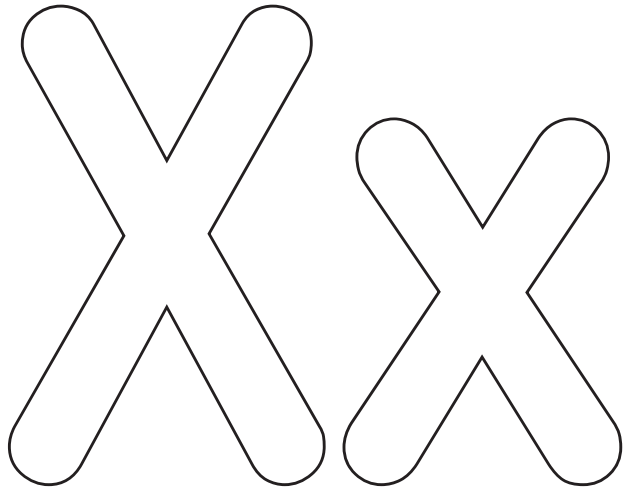
One insect that's easy to attract is the mosquito. Make sure you have your arms and legs covered to protect yourself from bites!

Zz

is for
Zebra Finch



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is for
Xenica Butterfly



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Illustration by Donna Hunt