

Snake charm: Four reasons to love snakes

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Credit: Engin Akyurt from Pexels

Picture this: the sun is shining, the birds are singing, and you're enjoying a hike in nature. You haven't a care in the world until you round the corner on your favorite walking trail. And then you see it.

A nope rope. A danger noodle. A [snake](#). Just lying across the middle of

the path, sunning itself like the rest of the world isn't there. How do you react?

If your answer is along the lines of "with sheer terror," read on. You may feel differently by the end of this article.

Australia has about 190 species of land snake, and only a very small handful (less than 10%) are potentially dangerous to humans. But despite this, and how important they are for our unique and diverse ecosystems, snake populations are declining.

Although [snakes](#) might be scary to some, there are many reasons to love them. In fact, we happen to think snakes are Aussie heroes! Here are four reasons why.

Rats! Foiled again!

Mice have been a problem in Australia ever since 1788. They cause millions of dollars in damage to grain-growing regions across Australia. Without snakes, we'd have an even bigger challenge on our hands.

Snakes are incredibly important for the balance of ecosystems. They help keep their [prey species](#)—including rodents and spiders—in check. While snakes don't eat enough to be a "solution" to plagues of mice and rats, they do help to maintain the structure and stability of Australia's ecosystems.

Dr. Damian Lettoof is a herpetologist (snake expert) and ecotoxicologist. According to Damian, snakes are a valuable indicator of ecosystem health.

"As a top predator, their presence and abundance relies on the stability of entire food webs," Damian said.

"Having large snakes around means the ecosystem is healthy enough to sustain them."

We need their venom

Only 12 species of venomous Australian snakes have bites that could be life-threatening to humans. But snakes help save lives every day.

Snake venom has been used for medicinal purposes since at least the first century. It is now a key ingredient in many different drugs.

Which ones, you ask? The African black mamba's venom contains a potent painkiller. And through our Kick-Start program, CSIRO worked with the Australian company Q-Sera to manufacture RAPClot, a fast-acting pro-coagulant that is based on [snake venom](#).

Elsewhere in the country, Dr. Michelle Yap Khai Khun of Monash University is researching how cytotoxins in Sumatran cobra venom can kill cancer cells. Michelle says the team want to wrap the toxic agent into nanoparticles, and deliver them to targeted cancer cells.

Consider the Rainbow Serpent

Snakes are indigenous to all parts of Australia and many varied and diverse communities of Aboriginal and Torres Strait Islander people feature the animals strongly in their Creation stories and in their paintings and carvings.

The snake can be depicted as a symbol of strength, creativity, and continuity. Snakes can also be a totem for some Indigenous communities, which symbolize the relationship of community members to each other, to ancestors and the past, and to particular places or sites.

Snakes are important to many distinct groups of people across Australia for their conservation, wild resource, and other cultural values.

The Rainbow Serpent in Indigenous culture represents one of the great and powerful forces of nature and spirit. Connected to water, the Rainbow Serpent is the great life giver, and protector of water, which is its spiritual home. For many, the Rainbow Serpent represents renewal in its ability to shed its skin. People pay great respect to the Rainbow Serpent, especially as they approach a waterhole.

To give one example, the Kunwinjku people of Kunbarlanja (Gunbalanya) in Western Arnhem Land describe Ngalyod, the great creation mother who brings the rejuvenating Wet Season after the long Dry. Across the country in Southwest Western Australia, the Noongar people also describe Waugal (also spelled Wagyl). In this example, Waugal is similarly the giver of life who formed various fresh bodies of water as they moved across the land, including the Murray, Harvey, and Serpentine rivers.

Boodjamulla National Park in Queensland is better known as Mumbaleeya Country (Rainbow Serpent Country) by the Waanyi People who are the Traditional Owners. Among the rocky sandstone gorges of Boodjamulla, where olive pythons hunt and sleep, is the six-meter long and nearly three-meter-high rock painting of the Lilydale Spring Rainbow Serpent.

This is the largest rock-art depiction of the Rainbow Serpent in the Riversleigh-Boodjamulla area and a reminder that Australia's biodiversity is a national strength.

Snakes are good recyclers

It doesn't need to be all about what's good for us. Sure, snakes eat

rodents, and have venom we can turn into lifesaving drugs. But snakes also play an important role in nutrient cycling and seed dispersion. They do this by preying on seed-eating animals, whose seeds they're unable to digest.

In a well-balanced ecosystem, snakes are also often both predator and prey, with smaller snakes being prey for larger predators. Many native Australian animals prey on snakes. This group include dingoes and goannas, birds like the brown falcon or the kookaburra, and even other snakes. In this way, snakes contribute to the energy cycling of the ecosystem.

In addition, Damien explains that snakes are ectothermic. That is, they rely on external sources for their [body heat](#), such as the sun or a nice warm rock. They can slow their bodies down and survive in harsh conditions longer than birds and mammals can. This means that as prey, they store energy for the food web and ecosystem for when conditions improve.

Snakes are simply sssssuperb

There are many more reasons snakes are sssssuperb. Like, did you know some herpetologists say older types of snakes—including pythons—still have the vestiges of legs from way back when?

Snakes' bodies are much cooler than you realize. Damien said many snakes shrink their whole digestive tract after a meal and then regrow it when they start eating again. This one weird trick saves them energy in between months of fasting, by not using excess energy maintaining all the cells in an entire digestive tract.

And you already know that snake's tongues smell, but did you know snakes can smell the difference between left and right? Snakes "collect"

smells on their tiny little forked tongues, and their brain knows where the smell is coming from by which side of the tongue has the strongest smell.

You might be able to curl your tongue, but can you use it to get around in the dark?

Staying safe around snakes

But we get it. However much you might want to like snakes, maybe you just can't and that's OK, too. Giving snakes some healthy distance is smart. So here are some tips for avoiding them (and what to do when you spot one):

- When out bushwalking and hiking, stay on the trail. Make a little noise as you go to give any snakes in the area notice of your arrival.
- Keep your yard tidy and clean of rubbish. Snakes love to hide, so give them fewer reasons to hang out at your place.
- Bird aviaries and chicken coops attract mice, because of the amount of seed and mess. Clean up after your chooks and keep them safe from unwanted visitors.
- If you find a snake in your house or property, don't try catching it: that's how people get bitten. Even baby snakes can be just as dangerous as adults. Keep yourself safe and call a professional snake catcher. But keep your eye on that snake, because they love disappearing when you're not looking.
- If you do have a snake in your home, before you call a snake catcher, shut the snake in one room (without you in it). With the snake then confined, put a rolled-up towel at the bottom of the door to keep the snake in the room, making it easier for the expert to catch.
- Australian snakes aren't naturally aggressive, and only attack if

they're provoked. If you meet a snake, give them some space and a chance to escape. Better yet, walk calmly in a different direction.

- Snakes are protected native animals in all states and territories of Australia and it's illegal to kill them. Since most snake bites happen when people try killing or catching snakes, it's better for us share our boundless plains with them peacefully.

So next time a snake makes a surprise appearance, spare a thought for the many awesome things they bring to our ecosystem and communities.

Provided by CSIRO

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