

Nectarivores: A world of sweet-toothed critters

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Credit: Simon Colenutt, CC BY 4.0

If you have a sweet tooth, you'll be familiar with the burst of energy known as a sugar rush. But what if your survival depended on it? Would you love it as much? Animals get the nutrients they need from different



sources.

They have been broadly classified as <u>carnivores</u>, <u>herbivores</u> and <u>omnivores</u>. But animal diets are more varied and specific. For instance, a <u>nectar</u>ivore is the term for an animal that feeds mostly on nectar.

In other words, nectarivores feed on liquid candy. Nectarivores need the energy that nectar provides to maintain their <u>metabolic functions</u>.

But plants need these animals to feed on nectar too.

When nectarivores sip on nectar, they collect scattered <u>pollen</u> produced in a flower's anthers (male reproductive organs). Then, when they visit another flower, they help transfer the pollen to the flower's stigma (female reproductive organ). This is how <u>pollination</u> occurs. And without pollination, there would be no plants.

WA is home to a variety of avid <u>nectarivores</u>, including approximately <u>800 species</u> of <u>native bees</u>.

And although not native to WA, the European honeybee is one of the most common nectarivores in the region.





A bee's tongue. Credit: James Petts, CC BY-SA 2.0

A honeybee's tongue is called a <u>glossa</u>. It is a <u>segmented tube covered in</u> <u>tiny hairs</u> that <u>trap nectar and suck it like a pump</u>.

<u>Rainbow lorikeets</u> are another nectarivore that's widespread across Western Australia. Like the European honeybee, they are an <u>introduced</u> <u>species</u>, but a key part of WA's landscape. They have <u>rough tongues with</u> <u>brush-like tips</u> that extend to capture and savor nectar from bottlebrush, eucalyptus and grevillea flowers.



And then there are natives like the elusive <u>honey possum</u>. This small marsupial has a <u>long snout</u>, <u>few teeth</u> and a <u>bristled tongue</u> as long as its head. These adaptations help it sip rapidly on its favorite <u>banksia</u> flowers. A convenient adaptation, since it can <u>sip up to its total body</u> <u>weight in nectar daily</u>.

Nectar is a wonderful treat, but not every animal can get a taste of it. It is usually reserved for animals with specific traits, like those previously described.

Sometimes, flowers will only attract a specific kind of pollinator, leading to what scientists have named <u>pollination syndromes</u>.

These tight bonds between animal and flower are forms of ecological <u>specialization</u>. And scientists have found that the <u>Southwest Australian</u> <u>Floristic Region</u> is home to a variety of these interactions. For instance, <u>flowers in the region</u> visited mainly by bees tend to be small, blue and yellow and to store pollen inside them.





Honey Possum. Credit: Kym Nicolson, CC BY 4.0

And <u>some species of native plasterer bees</u> have <u>enlarged mouthparts</u> (known as palpi), which allow them to extract <u>nectar</u> from the long silky-leaved blood flowers.

Nectarivores come in many shapes and sizes. And so do their tongues.

As pollinators, they are responsible for our <u>plant diversity</u> and <u>crops</u>. Therefore, protecting our nectarivores means ensuring our own survival.

As many <u>species around the world face extinction</u>, protecting nectarivores is fundamental.



Because who would have known that a sweet tooth could do so much for us?

This article first appeared on <u>Particle</u>, a science news website based at Scitech, Perth, Australia. Read the <u>original article</u>.

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