

Tongues give clues to snake sex secrets

June 19 2018



Christabel measured and dissected dugites found as roadkill for her research.
Credit: Dr Bill Bateman, Curtin University

For the Spotted Brown Snake (or dugite), size doesn't matter when it comes to sex.

Perth researchers found no difference between the lengths of [tongue](#) tines (the two sides of the tongue's 'fork') between male and female dugites—giving clues as to the snakes' behaviour.

"Initially we were surprised, because while sexual differences between snakes tend to be quite subtle, previous studies have shown that male North American pit vipers have longer tongue tines than females," says Christabel Khoo, who conducted the study as part of her Ph.D. at Curtin University.

"We think the differences can be explained by the two snakes' lifestyles. North American pit vipers are sedate ambush predators, and males are only active during the breeding season when they seek out females. In contrast, dugites of both sexes are active all year round."

Snakes use their forked tongues to collect chemicals from their environment, with a special organ in the roof of their mouths that interprets these chemicals as smells. The tines of the fork take samples from two places, allowing them to compare the signals and decide the direction the smell is coming from—helping them track prey or mates.

"This kind of research is important in helping us understand mating habits, and for informing conservation strategies for endangered reptiles," Christabel says.

Next, the team plans to investigate sexual differences in tine lengths in other reptiles with forked tongues, including other [snake](#) species, and lizards such as goannas.

Christabel presented the work at the Australian Society of Herpetologists Conference and the West Australian Herpetological Society Expo in 2017, and the research has been submitted to the *Journal of Zoology*.

Provided by Freshscience

Citation: Tongues give clues to snake sex secrets (2018, June 19) retrieved 16 June 2024 from <https://phys.org/news/2018-06-tongues-clues-snake-sex-secrets.html>

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