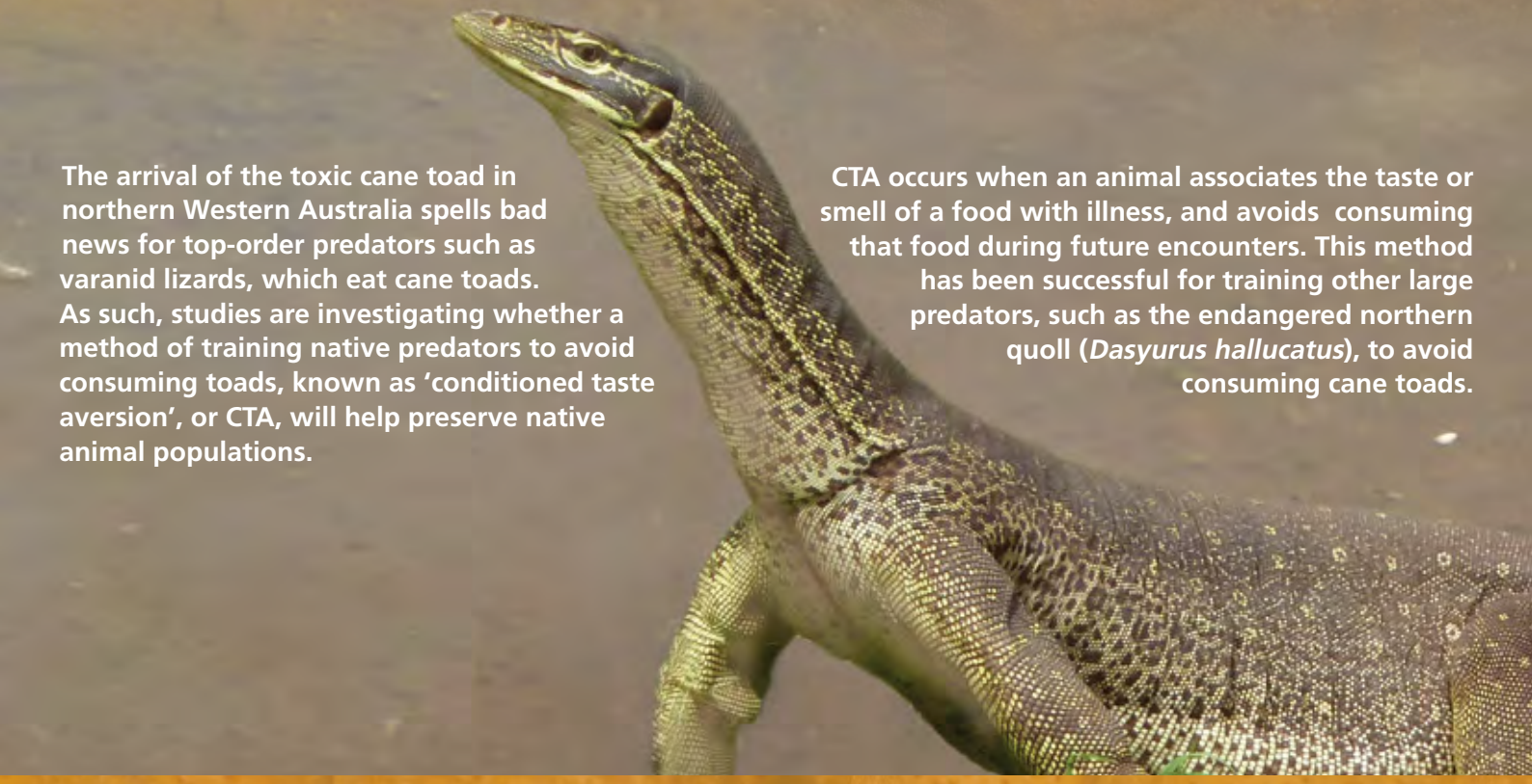
Species at risk from cane toads

Training lizards to avoid cane toads



The arrival of the toxic cane toad in northern Western Australia spells bad news for top-order predators such as varanid lizards, which eat cane toads. As such, studies are investigating whether a method of training native predators to avoid consuming toads, known as 'conditioned taste aversion', or CTA, will help preserve native animal populations.

CTA occurs when an animal associates the taste or smell of a food with illness, and avoids consuming that food during future encounters. This method has been successful for training other large predators, such as the endangered northern quoll (*Dasyurus hallucatus*), to avoid consuming cane toads.

Aims of the study

Our aim is to train the yellow-spotted monitor, or bungarra (*Varanus panoptes*), to avoid consuming cane toads by feeding them 'toad aversion baits' in captivity. The sausage baits, which taste and smell like toads, contain lithium chloride, a non-lethal chemical that induces minor illness.

Pilot studies show that water monitors (*V. mertensi*) learn to associate toad taste and smell with illness, and subsequently avoid attacking toads during encounters. However, we need more studies to determine whether the method works with yellow-spotted monitors. If our toad aversion baits are successful, then managers could deploy baits ahead of the toad invasion front to give predators, such as goannas, an opportunity to learn to avoid the cane toads before they invade.

Methods

Sixteen yellow-spotted monitors were collected from the Packsaddle floodplain, approximately six kilometres from Kununurra. Half of the goannas were fed aversion baits and half were not. We then attached radio transmitters to each goanna, so that they could be located daily once they were released back into the wild.

Results so far

Laboratory trials conducted before the release suggest that the goannas were able to gain an aversion to toads after ingesting an aversion bait. However, results from the telemetry study were inconclusive.

Future work

Ongoing monitoring of *V. panoptes* populations is occuring in areas where cane toads have invaded.

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Researchers
Rick Shine, Jonathon Webb and Jai Thomas,
School of Biological Sciences, The University of Sydney