Dramatic snake colour-change mystery solved

December 6 2006

An adult green python (top) and a spectacular yellow juvenile green python. Credit: Australian National University

The mystery surrounding a snake that undergoes a spectacular colour change has been solved by ANU ecologists who have found that the skin of the green python – which begins life either bright yellow or red – transforms to blend into a new habitat as the snake gets older.

Dr David Wilson and Dr Robert Heinsohn from the Centre for Resource and Environmental Studies at ANU, with Professor John Endler of

Exeter University, solved the mystery after a three year study radio-tracking the green python at Cape York Peninsula.

“Animals sometimes change colour during their lives, but none as dramatically as the green python of northern Australia and New Guinea. It has puzzled evolutionary biologists for decades,” Dr Heinsohn said.

“This beautiful reptile is popular in the pet trade because it hatches either bright yellow or red, but eventually turns emerald green. It turns out there is a very good reason for this dramatic change.”

For the study, published this week in the scientific journal *Biology Letters*, the researchers radio-tracked a large number of juvenile and adult pythons and analysed their colours using advanced spectrophotometry.

To their surprise, they found that the brightly coloured youngsters live in a completely different habitat to the older snakes. The juveniles remained outside the rainforest where they hunted small prey such as skinks and cockroaches, whereas the adults moved into the rainforest canopy to hunt rodents and birds.

The juvenile yellow and red colour allows them to blend in remarkably well with the multi-coloured leaves and grass at the forest edge. The adult green allows them to hide from their predators as they hunt for birds and rodents in the canopy.

“It was only when we established the total divergence in behaviour of the juveniles and adults that we could begin to understand their remarkably different colours.

“It takes a year before the young ones are large enough to catch bigger prey like birds. They then shed their skins, change to green, and move

inside the rainforest to try their luck off the ground.

“Drab juveniles are the norm in the animal world, but the brightly coloured young of green pythons are unique. They are helping us to understand where the bright and beautiful colours seen in nature come from and how they are maintained,” Dr Heinsohn said.

Source: Australian National University

Citation: Dramatic snake colour-change mystery solved (2006, December 6) retrieved 30 April 2024 from https://phys.org/news/2006-12-snake-colour-change-mystery.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.