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ZOOLOGGER 5 October 2016

## Weird orange crocodiles found gorging on bats in Gabon's caves

**Zoologger** is our weekly column highlighting extraordinary animals – and occasionally other organisms – from around the world.



### Spot the difference

Olivier Testa ([www.abanda-expedition.org](http://www.abanda-expedition.org))

By Josh Gabbatiss

**Species:** Dwarf crocodile (*Osteolaemus tetraspis*)

**Habitat:** Abanda caves, in the rainforests of Gabon

Caves are scary places – especially ones filled with crocodiles. “I was crawling through the cave and suddenly there were two red eyes,” says explorer Olivier Testa. “It was frightening!”

In 2010, he was part of an expedition into Gabon's Abanda cave system following a tip-off about a population of dwarf crocodiles living there.

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While crocs sometimes retreat underground during droughts, this is the first population

documented taking up long-term residence in caves.

The team's crocodile expert, Matthew Shirley from the Rare Species Conservatory Foundation, soon realised why they had done so: a bounty of ready-made snacks was falling into the water or lining up to be plucked off the cave walls.

"You walk in and there are just bats and crickets everywhere," he says. "The crocodiles are pretty good hunters anyway, but even if they didn't have to pull bats off the walls, there are individuals falling to the floor all the time."



### Flying snacks

Olivier Testa ([www.abanda-expedition.org](http://www.abanda-expedition.org))

Thanks to a steady diet of bats and other cave critters, the crocs appear to be in better physical condition than their forest counterparts, especially the young ones.

With at least 5 kilometres of caves to occupy, it's difficult to precisely know how many crocs are taking advantage of this banquet. However, based on the team's exploration up to 100 metres into the cave system, Shirley reckons there are at least 50, and probably many more.

## Orange is the new black

As the team headed further into the caves, they made an unexpected discovery: in the deeper recesses, the older, dark-coloured males had become paler, turning a bright orange. Were they losing unnecessary pigment in a similar way to other cave-dwelling animals, such as Mexican blind cavefish?

Shirley doesn't think so. Cave crocs must maintain contact with the outside world for one simple reason. "They cannot reproduce in the caves," he says. "It's a nesting ecology thing: they need big mounds of rotting vegetation to lay their eggs in."



### Hard to catch

Olivier Testa ([www.abanda-expedition.org](http://www.abanda-expedition.org))

So while the crocodiles appear to spend the entire dry season in the caves, they emerge during the wet season – at least to breed. Instead of the colour change marking an early stage of subterranean adaptation, Shirley has a more disgusting explanation.

The water these crocodiles swim through is essentially an alkaline slurry formed from bat droppings. "The urea in bat guano makes the water very basic," he says. "Eventually that will erode away the skin and change its colour."

Bizarrely, this is similar to the chemical treatment applied to crocodile skin so it can be turned into belts and wallets.

Dwarf crocs in Gabon are in little danger of becoming belts, but they are hunted extensively for bushmeat.



**Crocs swim in a slurry of bat droppings**

Olivier Testa ([www.abanda-expedition.org](http://www.abanda-expedition.org))

Thankfully, Shirley thinks the Abanda population avoids this threat, citing the difficulty he had capturing them in narrow, often impassable, tunnels – “and I consider myself to be fairly good at catching crocodiles”.

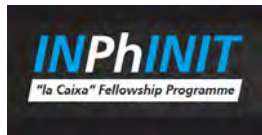
**Journal reference:** *African Journal of Ecology*, DOI: 10.1111/aje.12365

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A shorter version of this article was published in *New Scientist* magazine on 15 October 2016

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