

# Could Global Warming Be Crushing Blow to Crocodiles?

November 27 2006

---



Nile crocodiles are among the fiercest predators in the Okavango Delta, Botswana, yet their population has shrunk due to habitat loss and hunting. Dr. Alison Leslie of University of Stellenbosch suggests that climate change will be a further setback to crocodile numbers. Credit: Oscar Baldomero

With global temperatures generally on the rise, crocodiles may have a harder time finding mates. For crocodiles, gender is not determined genetically, but rather by embryo temperature during incubation, notes Earthwatch-supported scientist Dr. Alison Leslie, of South Africa's University of Stellenbosch.

In an interview with three teenagers on a mission to find out about their planet, the subject of the new film *A Year on Earth*, Leslie explained

how global warming could affect crocodile populations worldwide.

“A difference of 0.5 - 1°C in incubation temperature results in markedly different sex ratios,” says Leslie, principal investigator of Earthwatch’s Crocodiles of the Okavango Delta project. Research shows that nest temperatures of about 32-33 degrees Celsius result in males, while temperatures higher and lower result in females. Temperatures within a nest can vary from the top to the bottom of the nest, and can result in mixed-gender hatchlings.

“More female hatchlings due to the cooler or hotter incubation temperatures could lead to eventual extirpation of the species from an area,” says Leslie.

The three teens, Jamie (18), Arsen (17), and Tyler (16), visited Leslie at her camp in the Okavango Delta, Botswana, where they acted as field research assistants on Leslie’s Earthwatch-supported research expedition. Their participation was part of a feature-length documentary, *A Year on Earth*, that will air on the Discovery Kids Channel in December.

The teens helped Leslie trap and examine Nile crocodiles big and small to monitor their diet, health, movements, and reproductive biology. Crocodile populations have dwindled dramatically in Botswana, due to overexploitation by hide hunters and conflicts with nearby communities.

“Even though crocodilians have been around for millions of years, and as important as these creatures may be in the systems they occupy, they are a much understudied species,” says Leslie. For more than eight years, in both Botswana and South Africa, Leslie has been working with the support of Earthwatch Institute to change that.

In 2007, Leslie will leave behind her Okavango research camp (in the capable hands of staff member Sven Bourquin), and will embark on a

new study of the crocodiles along Zambia's Zambezi River. Earthwatch volunteers will continue to assist her as she assesses the conservation needs of this population and surveys local villagers about crocodile impacts.

Earthwatch Institute is a global volunteer organization that supports scientific field research by offering members of the public unique opportunities to work alongside leading field scientists and researchers. Earthwatch's mission is to engage people worldwide in scientific field research and education to promote the understanding and action necessary for a sustainable environment. The year 2006 marks Earthwatch's 35th anniversary.

See Dr. Alison Leslie in *A Year on Earth*, a two-part special to debut on Discovery Kids Channel on December 3 and 10. *A Year on Earth* chronicles the work of three American teens who join Leslie in the Okavango Delta and several other Earthwatch research projects around the world. Together, they discover how ordinary people can make a difference in the most pressing environmental issues of our time.

Source: Earthwatch Institute

Citation: Could Global Warming Be Crushing Blow to Crocodiles? (2006, November 27) retrieved 26 April 2024 from <https://phys.org/news/2006-11-global-crocodiles.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.