

Critically endangered crocodile hatchlings from same nest may have multiple fathers

March 16 2016



Fig 1. Location of the El Frío Biological Station (EFBS), and three additional localities where last remaining populations of *Crocodylus intermedius* are found in Venezuela. Credit: Lafferriere *et al.* *PLOS ONE* DOI:10.1371/journal.pone.0150245

Genetic analysis revealed that critically endangered Orinoco crocodile hatchlings from the same clutch may have multiple fathers, according to a study published March 16, 2016 in the open-access journal *PLOS ONE* by Natalia Rossi Lafferriere from Columbia University and colleagues.

Understanding reproductive behavior helps to inform reintroduction programs for [critically endangered species](#). The Orinoco crocodile is one of the most threatened crocodile species in the world and has been reduced to only a few wild populations in Venezuela and Colombia. One of these populations was founded by reintroducing Orinoco [crocodiles](#) in El Frío Biological Station, Venezuela. To understand [reproductive behavior](#) of this population of Orinoco crocodiles, researchers collected twenty egg clutches for incubation in the lab for one year and then released the juveniles. They also conducted [genetic analysis](#) on the over 330 hatchlings to infer paternity.

They inferred from genetic analysis that there were 14 mothers and 16 fathers of the 20 clutches and that half of the clutches were fathered by two or three males. They also found that fathers contributed unequally to offspring, with six of the 14 inferred males fathering 90% of the total offspring, and three of those six males fathering more than 70% of the total offspring. The authors suggest their results provide the first evidence of multiple paternity occurring in a reintroduced Orinoco crocodile population and support the success of reintroduction efforts of this critically endangered species in El Frío Biological Station, as multiple paternity has been shown to potentially increase the overall genetic diversity of a population. Further studies are needed to understand other factors influencing survival, but the information from this study may help inform conservation strategies and long-term management plans for the species.

More information: *PLOS ONE*,
[dx.plos.org/10.1371/journal.pone.0150245](https://doi.org/10.1371/journal.pone.0150245)

Provided by Public Library of Science

Citation: Critically endangered crocodile hatchlings from same nest may have multiple fathers (2016, March 16) retrieved 25 April 2024 from <https://phys.org/news/2016-03-critically-endangered-crocodile-hatchlings-multiple.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.