

Ancient African skull sheds light on American crocodile origins

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The extinct African crocodile species *Crocodylus checchiai* may be closely related to American crocodile species alive today, according to a study published in *Scientific Reports*. The findings suggest that crocodiles

may have migrated from Africa to America during the Late Miocene epoch (11-5 million years ago).

Prior to this discovery it was unclear whether crocodiles reached the Americas from Africa, via a hypothesized transatlantic voyage, or vice-versa. Massimo Delfino and colleagues used CT imaging to re-examine a skull of *C. checchiae* stored at the Earth Sciences museum MUST of Sapienza University of Rome, that was discovered in 1939 in As Sahabi, Libya. The authors identified several new skull structures including a protrusion in the middle of the snout of *C. checchiae* that had not been identified on any other African crocodile [species](#) but that is present on the skulls of the four living American crocodile species *Crocodylus intermedius*, *C. moreleti*, *C. acutus* and *C. rhombifer*. This shared [skeletal structure](#) indicates a close evolutionary relationship between *C. checchiae* and American crocodiles.

Further analyses of the evolutionary relationships between species suggest that *C. checchiae* may be part of the same lineage as the four crocodile species found in North and South America today. The remains of *C. checchiae* have been dated to around seven million years ago while the oldest remains of an American crocodile, the extinct *C. falconensis*, have been dated to around five million years ago. Based on these findings, the authors propose that [crocodiles](#) reached America by migrating westwards from Australasia via Africa.

More information: Massimo Delfino et al, Old African fossils provide new evidence for the origin of the American crocodiles, *Scientific Reports* (2020). [DOI: 10.1038/s41598-020-68482-5](https://doi.org/10.1038/s41598-020-68482-5)

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