

New study confirms the power of Deinosuchus and its 'teeth the size of bananas'

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Deinosuchus schwimmeri (MMNS VP-256) skull. A, left lateral view. B, right lateral view. C, anterodorsal view demonstrating the unique orbital morphology and midline furrow of the skull table. Scale bar equals 5 cm. Credit: Adam Cossette

A new study, revisiting fossil specimens from the enormous crocodylian,

Deinosuchus, has confirmed that the beast had teeth "the size of bananas," capable of taking down even the very largest of dinosaurs.

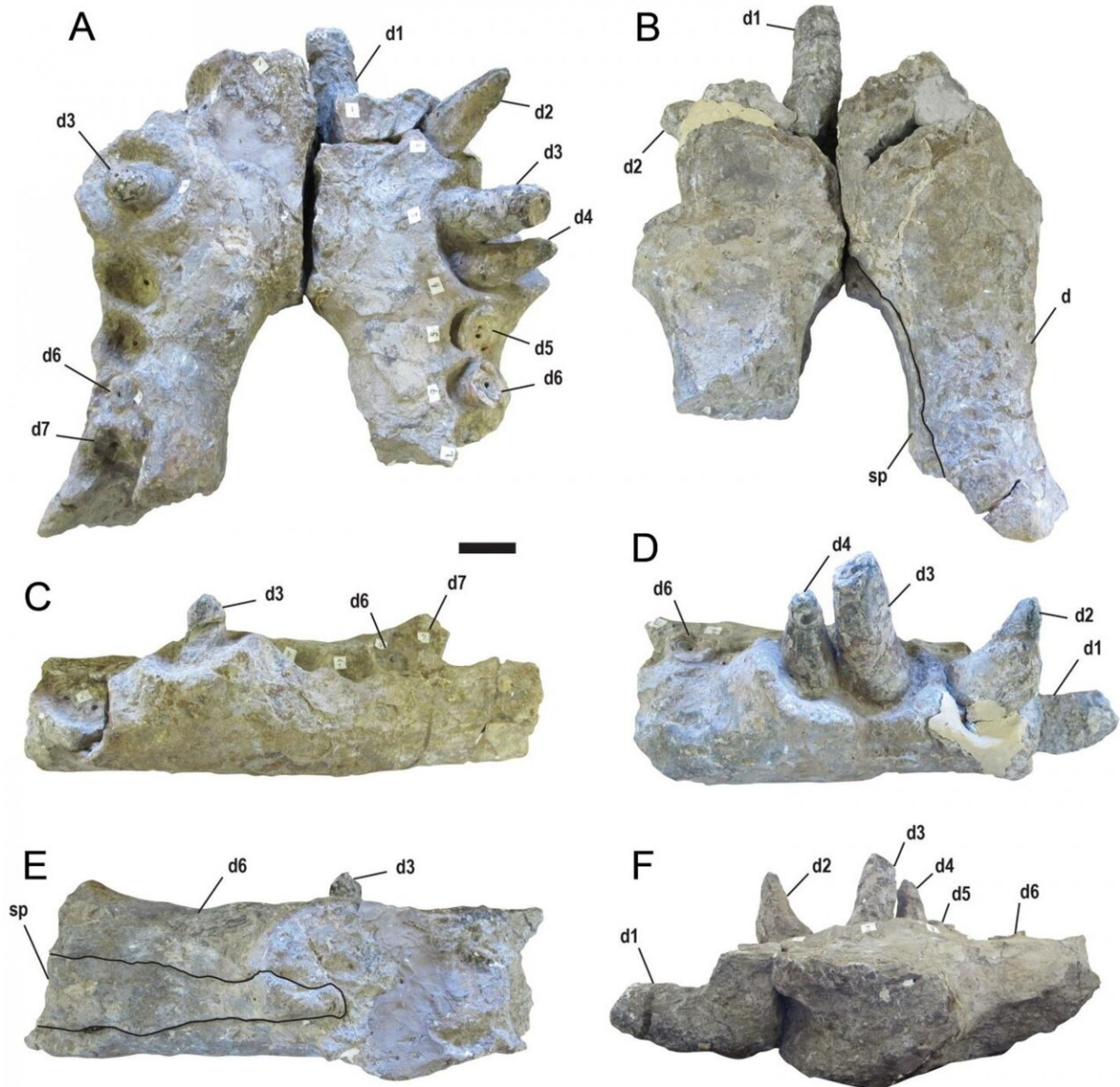
And, it wasn't alone!

The research, published in the *Journal of Vertebrate Paleontology*, also reveals various kinds of 'terror crocodile.' Two species, entitled *Deinosuchus hatcheri* and *Deinosuchus riograndensis* lived in the west of America, ranging from Montana to northern Mexico. Another, *Deinosuchus schwimmeri*, lived along the Atlantic coastal plain from New Jersey to Mississippi. At the time, North America was cut in half by a shallow sea extending from the Arctic Ocean south to the present-day Gulf of Mexico.

Ranging in up to 33 feet in length *Deinosuchus*, though, has been known to be one of the largest, if not the largest, crocodylian genera ever in existence. It was the largest predator in its ecosystem, outweighing even the largest predatory [dinosaurs](#) living alongside them between 75 and 82 million years ago.

From previous studies of cranial remains and bite marks on dinosaur fossil bones, paleontologists have long speculated that the massive beasts preyed on dinosaurs.

Now this new study, led by Dr. Adam Cossette sheds new light on the monstrous creature and has further confirmed that z most certainly had the head size and crushing jaw strength to do just that.



Deinosuchus riograndensis holotype specimen (AMNH 3073) anterior mandible. A, anterior mandible in dorsal view. B, anterior mandible in ventral view. C, left anterior mandibular ramus in lateral view. D, right anterior mandibular ramus in lateral view. E, left anterior mandibular ramus in medial view. F, right anterior mandibular ramus in medial view. Abbreviations: d, dentary; d1-d7, dentary teeth corresponding to positions in the mandibular dental arcade; sp, splenial. Scale bar equals 5 cm. Credit: Adam Cossette

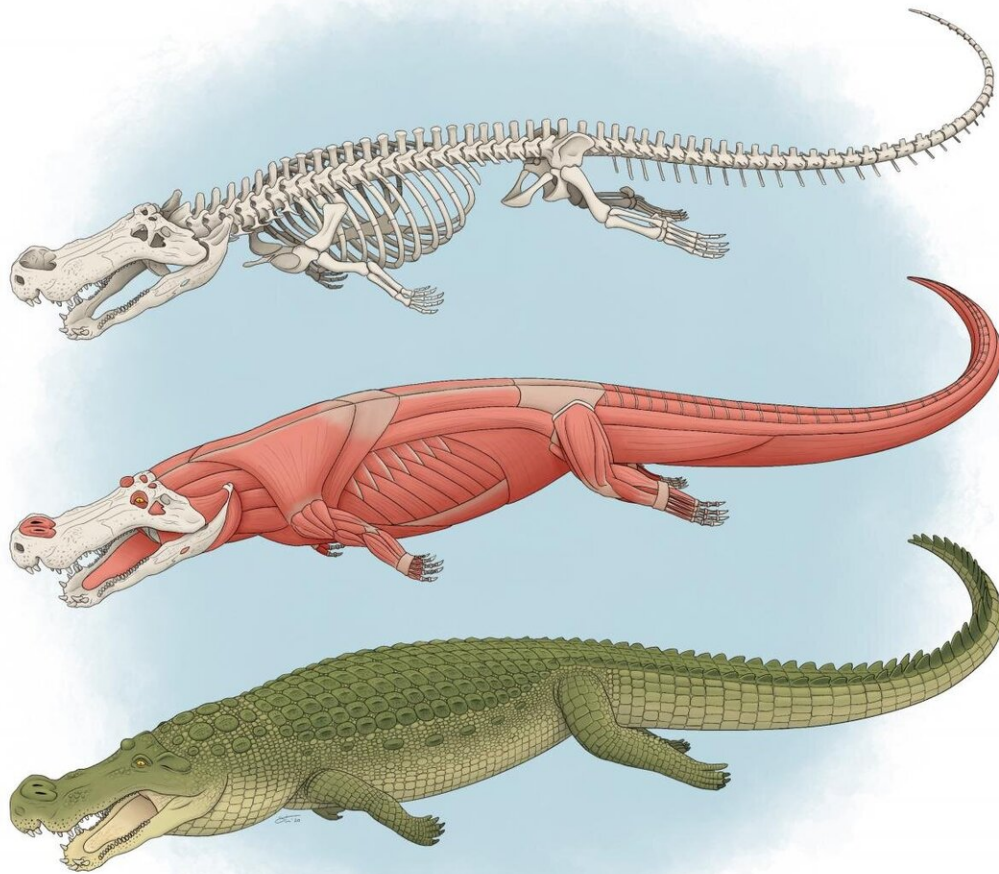
"Deinosuchus was a giant that must have terrorized dinosaurs that came to the water's edge to drink," says Dr. Cossette, from the New York Institute of Technology College of Osteopathic Medicine at Arkansas State University. "Until now, the complete animal was unknown. These new specimens we've examined reveal a bizarre, monstrous predator with teeth the size of bananas."

Co-author Stephanie Drumheller-Horton, a paleontologist at the University of Tennessee, added: "Deinosuchus seems to have been an opportunistic predator, and given that it was so enormous, almost everything in its habitat was on the menu."

"We actually have multiple examples of [bite marks](#) made by *D. riograndensis* and a species newly described in this study, *D. schwimmeri*, on turtle shells and dinosaur bones."

In spite of the genus's name, which means "terror crocodile," they were actually more closely related to alligators. Based on its enormous skull, it looked like neither an alligator nor a crocodile. Its snout was long and broad, but inflated at the front around the nose in a way not seen in any other crocodylian, living or extinct. The reason for its enlarged nose is unknown.

"It was a strange animal," says Brochu. "It shows that crocodylians are not 'living fossils' that haven't changed since the age of dinosaurs. They've evolved just as dynamically as any other group."



An illustration of Deinosuchus from the journal's cover.(Illustration by Tyler Stone BA '19, art and cinema;see his website <https://tylerstoneart.wordpress.com>) Credit: Tyler Stone

Deinosuchus disappeared before the main mass extinction at the end of the age of dinosaurs (Meozoic). The reason for its extinction remains unknown. From here, the authors call for me studies to further understand Deinosuchus.

"It had two large holes are present at the tip of the snout in front of the nose," Dr. Cossette says.

"These holes are unique to Deinosuchus and we do not know what they were for, further research down the line will hopefully help us unpick this mystery and we can learn further about this incredible creature."

More information: Adam P. Cossette et al, A systematic review of the giant alligatoroid Deinosuchus from the Campanian of North America and its implications for the relationships at the root of Crocodylia, *Journal of Vertebrate Paleontology* (2020). [DOI: 10.1080/02724634.2020.1767638](https://doi.org/10.1080/02724634.2020.1767638)

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