

## New 90-million-year-old fossil turtle discovered living alongside dinosaurs in the Zuni Basin, NM

A new fossil species of Cretaceous baenid (extinct turtle) was recently discovered from the Moreno Hill Formation in the Zuni Basin of western New Mexico. The new species, known as *Edowa zuniensis* (Fig. 1), is the first of its family found in the Turonian of North America. It fills an important gap in time in the middle Cretaceous turtle fossil record. *Edowa* would have lived among Zuni Basin dinosaurs, including the tyrannosauroid *Suskityrannus*, the ceratopsian *Zuniceratops*, and the therizinosaur *Nothronychus*.



Fig. 1. Reconstruction of *Edowa zuniensis*, a new species of extinct turtle from the Zuni Basin, New Mexico. Artwork by Brent Adrian.

The genus name “*Edowa*” is the word for “turtle” in the language of the Zuni indigenous peoples of western New Mexico and eastern Arizona, and the species name “*zuniensis*” refers to the Zuni Basin, where the species lived. The type specimen was discovered in the late 1990s during an expedition led by Doug Wolfe, a PI with the Mesa Southwest Museum (now the Arizona Museum of Natural History), with James Kirkland, then of Dinamation International, with assistance by volunteers from the Southwest Paleontological Society. The fossils are housed in the paleontology collection at the Arizona Museum of Natural History, where they sat unstudied until 2021 when paleontologist Brent Adrian and his team identified them in the collection and set out to describe

the new species.

"The new species fills an enormous gap in our understanding of the evolution of this native group of turtles, and shows that advanced traits evolved significantly earlier and in a wider distribution than previously expected," said Adrian.

Trace fossils on the shell of *Edowa*'s type specimen suggest that it experienced a crocodile attack and infection by ectoparasites such as leeches during its lifetime. Another Cretaceous turtle, *Naomichelys*, was also discovered to be living in the Zuni Basin alongside *Edowa*.

"Zuni Basin dinosaurs, its turtles, and other fauna point to connections between fossils in Asia and the origins of more commonly known taxa like *T. rex* and *Triceratops* from the Late Cretaceous of North America." said Wolfe. The research team is also investigating the diversity of turtles from multiple localities through the Late Cretaceous.

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*Land Acknowledgement: The specimens were collected on federal lands under a permit from the Bureau of Land Management. These lands are also recognized as the traditional homelands of the Shiwinna (Zuni), Diné Bikéyah, and Pueblo peoples.*

## Publication

[A new baenid, \*Edowa zuniensis\* gen. et sp. nov., and other fossil turtles from the Upper Cretaceous Moreno Hill Formation \(Turonian\), New Mexico, USA](#)

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