

## Oldest frog in North America discovered preserved in rocks

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Remains of some of the oldest ever frogs have been recovered by sifting through fragments of rock from Arizona.

The creatures, which shared the prehistoric landscape with dinosaurs, were identified based on tiny shards of hip bone smaller than a fingernail.

Belonging to an as-yet unnamed species that lived around 216 million years ago, they are thought to be the most ancient frogs ever identified in North America.

The miniscule remains were found alongside enormous, crocodile-like phytosaurs, as well as early dinosaur species.

Scientists are used to finding these much larger animals preserved in the Chinle Formation, a rock structure dating to the Triassic period that stretches from Nevada to New Mexico.



Artist rendering of Chinle frog, inside the jaw of a giant, crocodile-like phytosaur (Audrey Atuchin/Virgina Tech)

However, the team said their latest discovery was evidence of a wealth of tiny creatures scuttling around beneath the dinosaurs' feet at this time in the planet's history.

"The Chinle frog could fit on the end of your finger," said palaeontologist Dr Michelle Stocker, noting they were now focusing on searching for diminutive life-forms.

"With this new focus we're able to fill in a lot of those missing smaller components with new discoveries."

"Our development of methods that recover delicate bones from small-bodied vertebrates enabled this exciting discovery," said PhD student Ben Kligman.

“Our aim is to use similar techniques in the Chinle Formation to uncover the early history of other small-bodied animals including lizards, salamanders, turtles and mammals.”

The oldest frogs ever discovered have been unearthed in rocks from Madagascar and Poland, dating back roughly 250 million years.

The specimen found by Dr Stocker and her team in Arizona was more similar to modern-day frogs than these older individuals, but is not thought to be a direct ancestor of the amphibians seen today in ponds around the world.

As the scientists continue to delve through their rock samples, they hope to find skulls and additional bones that will enable them to learn more about the Chinle frogs.

The findings were published in the journal *Biology Letters*.