

Treasure trove of late Triassic fossils discovered in Utah

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In this undated photo provided by Brigham Young University on Oct. 16, 2015, paleontologists work at a site where a pterosaur, which would have been the largest flying reptile of the time some 210 million years ago, was found in 2009, in Dinosaur National Monument near the town of Jensen in northeastern Utah. Paleontologists have discovered a cliff brimming with fossils that offers a rare glimpse of desert life in western North America early in the age of dinosaurs. (Brooks Britt/Brigham Young University via AP)

Paleontologists have discovered a cliff-side in Utah brimming with fossils that offers a rare glimpse of desert life in western North America early in the age of dinosaurs.

Among the discoveries in what used to be a lake shoreline between giant sand dunes is a new pterosaur that would have been the largest flying reptile of the time. It wielded its ferocious teeth and powerful skull to gobble up small crocodile type creatures as it soared over a desert some 210 million years ago.

"If you saw one of these things coming at you with its jaws open, it would freak you out of your mind," said Brooks Britt, a Brigham Young University paleontologist who presented preliminary findings this week at the Society of Vertebrate Paleontology conference in Dallas.

He and fellow paleontologists plan to publish the findings in scientific journal next year. Eight different animals, most likely new, have been identified at a site discovered in 2009 near Dinosaur National Monument on the Utah-Colorado border. The discoveries include:

- A type of a strange-looking reptile with a head like a bird, arms like a mole and a claw on the tip of the tail called a drepanosaur.
- Several small crocodile-like creatures with armor on their backs called sphenosuchians.
- Two different types of meat-eating dinosaurs, one related to the coelophysis, a scrawny dinosaur featured in the recent movie, "Walking with Dinosaurs."

"It's a fantastic site," said Brian Andres, a University of South Florida paleontologist who heard the presentation this week. "It's in a time and a place that we really do not have a good record of."

The pterosaur discovery is significant because it fills a gap in the fossil record between earlier, smaller pterosaurs and the giant ones that came later, Andres said.

It is related to another wicked-jawed pterosaur discovered in England: the Dimorphodon.

Each side of its lower jaw had two fangs and 28 teeth. "This thing is built like an aerial predator," Andres said.

The skull and wing bone found are also noteworthy because they are intact, and not crushed, a rarity for pterosaurs. It is the first known Triassic pterosaur found in North America, other than one unearthed in Greenland, Britt said.

"It is absurdly rare to find delicate, small skeletons from anywhere in time, anywhere in the world," said Adam Pritchard, a Yale paleontologist not part of the discovery team. "To have them from the Triassic period, which is the very beginning of the age of reptiles, is really unprecedented, especially in western north America."

The site was discovered paleontologists Dan Chure of Dinosaur National Monument and George Englemann of the University of Nebraska. Chure said the duo realized right away they had stumbled upon the discovery of their lives.

So far, they've found 11,500 bones—and they may be only halfway through getting them all out, he said. The new pterosaur, yet to be named, was found last year by a college student carefully extracting fossils from a 300-pound block of sandstone from the site.

"This is the best stuff I'll ever see in my life," said Britts, 60, who has been collecting dinosaur fossils for five decades. "It's like Christmas

every day."

The site has been named "Saints and Sinners," a playful nod to the collaboration between Britt, a member of The Church of Jesus Christ of Latter-day Saints, and non-Mormons Chure and Englemann.

"I'm not sure we would exactly consider ourselves sinners, but it had a nice ring to it," Chure said.

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