

Huge deposit of Jurassic turtle remains found in China

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Paleontologists from University of Tübingen and Berlin Natural History Museum can make first statistical analysis of ancient species.

"Bones upon bones, we couldn't believe our eyes," says Oliver Wings, paleontologist and guest researcher at the Museum für Naturkunde in Berlin. He was describing the spectacular find of some 1800 fossilized mesochelonia turtles from the Jurassic era in China's northwest province of Xinjiang. Wings and the University of Tübingen's fossil turtle specialist, Dr. Walter Joyce, were working with Chinese paleontologists there in 2008. The results of their further work in 2009 and 2011 have just been published in the German journal "Naturwissenschaften."

"This site has probably more than doubled the known number of individual turtles from the Jurassic," says Walter Joyce. "Some of the shells were stacked up on top of one another in the rock." It is what paleontologists call a "bone bed" – in this case consisting only of turtle remains.

Wings, Joyce and their team have made several

expeditions to the arid region since 2007, finding fossil sharks, [crocodiles](#), mammals and several dinosaur skeletons. Today one of the world's driest regions, 160 million years ago Xinjiang was a green place of lakes and rivers, bursting with life. Yet the scientists have shown that even then, conditions were not always ideal, with climate change leading to seasonal drought – and this remarkable fossil find.

The turtles had gathered in one of the remaining waterholes during a very dry period, awaiting rain. Today's turtles in Australia for instance do the same thing. But for the Xinjiang turtles, the rain came too late. Many of the turtles were already dead and their bodies rotting. When the water arrived, it came with a vengeance: a river of mud, washing the turtles and sediments along with it and dumping them in one place, as the paleontologists read the site and its layers of stone.

The large number of turtles allows the researchers to make a first statistical analysis of Asian [turtles](#) in the Jurassic period. Their simultaneous death and preservation makes it possible to compare variability, growth, and morphological differences among the species. The scientists are looking for sponsors to support further field studies and research into the dinosaur finds.

Provided by University of Tübingen

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