

Scientists discover 2 new dinosaur species

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Researchers from Field Museum in Chicago have helped discover two new dinosaur species in China's Gobi Desert: a 5-foot-tall forebear of Tyrannosaurus rex and a half-ton beaked dinosaur reminiscent of a giant ostrich.

The findings, reported online this week in the scientific journal Proceedings of the Royal Society B, follow two summers of collaborative research between U.S. and Chinese scientists who found the new species and several others in rocky strata in the southern Gobi.

Both dinosaurs lived about 110 million years ago, researchers said.

One of the species, Xiongguanlong baimoensis (shong-GWAN-long by-mo-EN-sis), suggests how tyrannosaurs evolved into eating machines that later terrorized the Cretaceous Period.

T. rex and Albertosaurus are the largest, best known and most recent tyrannosaurs known to stalk the Earth. In the last decade, fossils of the species' earliest known and much smaller forebears were unearthed in China and England.

The mid-weight Xiongguanlong appears in the 50-million-year gap between those groups, its discoverers say. While the species was not yet the prehistoric terror its descendants would become, it marks the earliest appearance of key traits such as broader skull attachments for massive jaw muscles and thicker vertebrae to support larger heads.



"It gives us a nice window on a chapter of tyrannosaur evolution that we didn't have," said Peter Makovicky, curator of dinosaurs at the Field.

The second species, Beishanlong grandis (bay-SHAN-long gran-DIS), is one of the biggest ornithomimosaurs, or ostrich-shaped dinosaurs, yet found. Though researchers believe the creature perished in its 14th year of life, it already weighed 1,400 pounds, with 6-inch claws on its hands and powerful forelimbs for digging and raking the ground.

"Just finding something that big -- I've been doing it for a while, but there's still that 10-year-old boy inside of me," Makovicky said.

This team also found evidence of several other dinosaur species, as well as a noteworthy pattern of fossil distribution: Horned and sickle-clawed dinosaurs dominated in reddish rocks deposited in dry conditions, while tyrannosaurs, ornithomimosaurs and duck-billed dinosaurs were found in rocks formed in wetter environments.

"That's a pretty exciting bigger-picture look at how animals might have evolved with environments in which they occurred," Makovicky said.

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