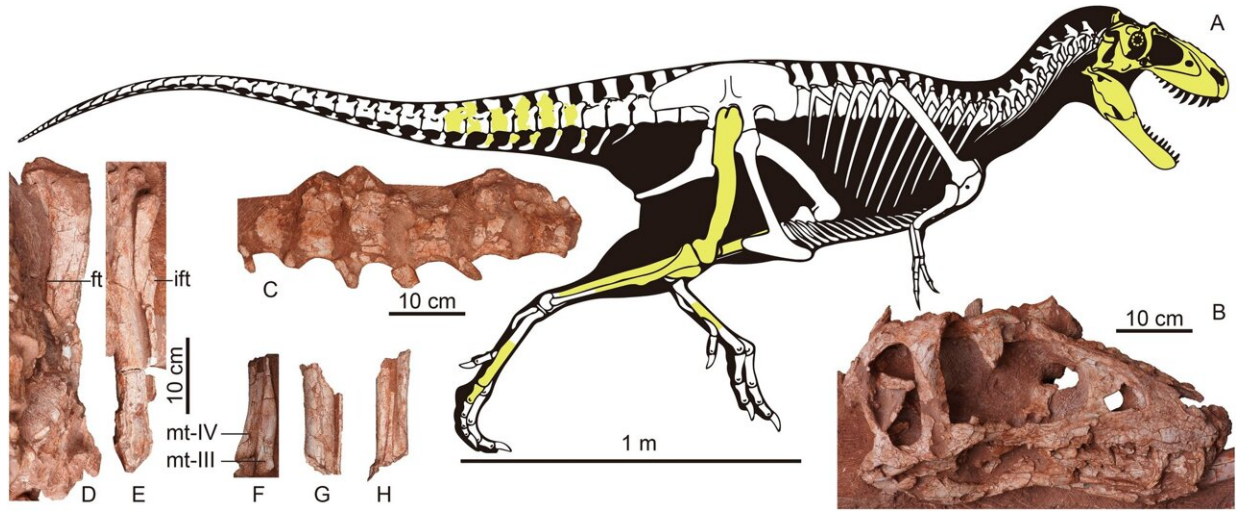
New species of tyrannosaurid dinosaur identified in China

July 29 2024, by Bob Yirka



Fossil remains of Asiatyrannus xui (ZMNH M30360). Credit: *Scientific Reports* (2024). DOI: 10.1038/s41598-024-66278-5

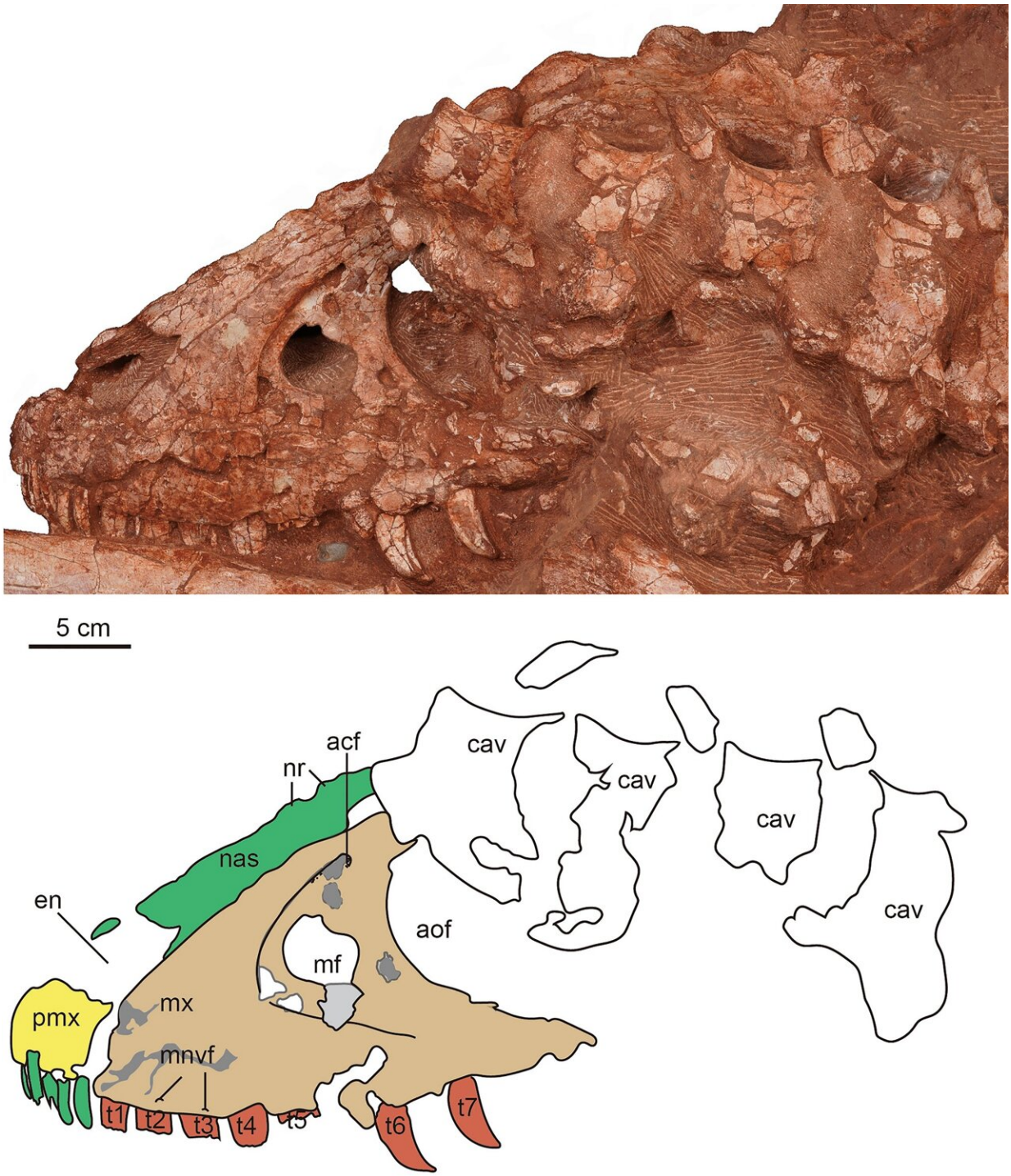
A team of paleontologists at the Zhejiang Museum of Natural History in China reports a new species of tyrannosaurid dinosaur. Their find is published in the journal *Scientific Reports*.

Tyrannosaurids were a group of dinosaurs of the subfamily Tyrannosauridae. Prior research has shown that there were at least 30 species in the subfamily, all of which were known for their great size and large, deep snout filled with sharp teeth. They all walked on two feet

and were considered apex predators. They are believed to have first appeared around 165 million years ago.

In this new study, the research team focused on fossil remains found at a construction site in Ganzhou City in 2017, a skull and partial vertebra, hind legs and tail skeleton. The researchers note that the Tyrannosauroids are the most studied of all the dinosaurs.

The research team was able to identify the specimen as a small tyrannosaurid, roughly half the size of Qianzhousaurus. Its skull was 47.5 cm, and they estimate its length was approximately 3.5 to 4 meters. The find represents a previously unknown species, and the researchers named it Asiatyrannus xui, after Xu Xing, a well-known Chinese scientist.



The photograph and line drawing of the skull of Asiatyrannus xui (ZMNH M30360) in left lateral view. Credit: *Scientific Reports* (2024). DOI: 10.1038/s41598-024-66278-5

The fossil dates to approximately 66 to 72 million years ago, putting it in the Late Cretaceous epoch. Its snout and body had different proportions than the larger tyrannosaurines. The researchers suggest such differences indicate that A. xui filled a different ecological niche than its larger cousins, possibly feasting on smaller and faster prey. They also note that the find is the first ever for a deep-snouted tyrannosaur in the southern part of China.

The location of the find adds credence to theories that tyrannosaurids migrated from Laramidia later than previously thought. Prior research has suggested that an island named Laramidia was the origin of the tyrannosaur lineage—it was believed to exist in what is now the west coast of North America.

More information: Wenjie Zheng et al, The first deep-snouted tyrannosaur from Upper Cretaceous Ganzhou City of southeastern China, *Scientific Reports* (2024). DOI: 10.1038/s41598-024-66278-5