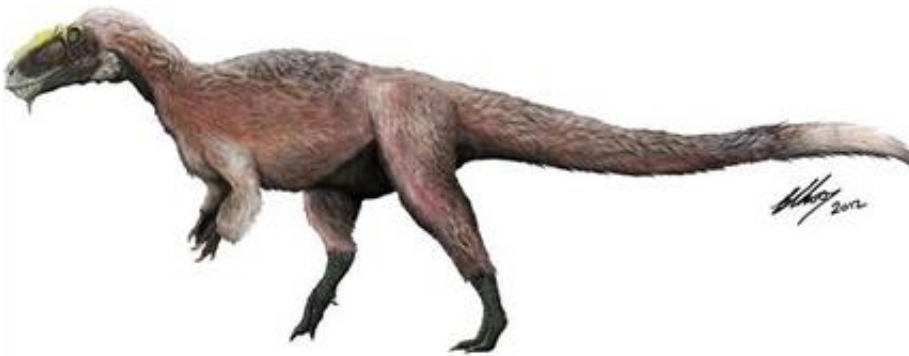


Warm and fuzzy T. rex? New evidence surprises

April 4 2012, By ALICIA CHANG , AP Science Writer



This artist concept provided by the Beijing Institute of Vertebrate Paleontology and Paleoanthropology shows a new species of tyrannosaur, *Y. huali*, discovered in China. A new study published in the journal *Nature* found that *Y. huali*, an earlier relative of *T. rex* had a feathery coat, suggesting that the king of dinosaurs may have also been fuzzy. (AP Photo/Beijing Institute of Vertebrate Paleontology and Paleoanthropology, Brian Choo)

The discovery of a giant meat-eating dinosaur sporting a downy coat has some scientists reimagining the look of *Tyrannosaurus rex*.

With a killer jaw and sharp claws, *T. rex* has long been depicted in movies and popular culture as having scaly skin. But the discovery of an earlier relative suggests the king of [dinosaurs](#) may have had a softer side.

The evidence comes from the unearthing of a new tyrannosaur species in

northeastern China that lived 60 million years before T. rex. The [fossil record](#) preserved remains of fluffy down, making it the largest [feathered dinosaur](#) ever found.

If a T. rex relative had feathers, why not T. rex? Scientists said the evidence is trending in that direction.

"People need to start changing their image of T. rex," said Luis Chiappe, director of the Dinosaur Institute at the [Natural History Museum](#) of Los Angeles County, who was not part of the discovery team.

Much smaller dinosaurs with primitive feathers have been excavated in recent years, but this is the first direct sign of a huge, shaggy dinosaur. Scientists have long debated whether gigantic dinosaurs lost their feathers the bigger they got or were just not as extensively covered.



Artists' depiction of Yutyrannus huali. Artwork by Lida Xing and Yi Liu.

The new tyrannosaur species, Yutyrannus huali, is described in

Thursday's issue of the [journal Nature](#). Its name is a blend of Latin and Mandarin, which translates to "beautiful feathered tyrant."

A team of Chinese and Canadian scientists analyzed three well-preserved fossil skeletons - an adult and two juveniles - recovered from a quarry in China's Liaoning province by a private fossil dealer. Most striking were the remains of down-like feathers on the neck and arm. Though coverage was patchy, scientists suspected the species had feathers over much of its body.



Skull of Yutyrannus. Photo may be used freely to accompany an article on this new animal, but should be credited to Mr Zang Hailong. Future requests for use should be directed to Prof. Xu Xing.

It would have felt like touching "long, thick fur," co-author Corwin Sullivan of the [Chinese Academy of Sciences](#) said in an email. Another scientist, Thomas Holtz Jr. at the University of Maryland, compared it to

the feathers of an emu.

The creature lived about 125 million years ago. At 30 feet long and weighing a ton, *Y. huali* would have reached *T. rex*'s chest.

The dino-fuzz likely provided insulation, though camouflage or showing it off like a peacock could not be ruled out.

Since *T. rex* is related to this newfound feathery species, chances are good that *T. rex* was feathered as well, scientists said. Just don't mistake fuzzy for cuddly. The predatory dinosaur would have been just as menacing.

Having feathers "doesn't make it less threatening or less fearsome," said Holtz, who had no role in the research.

Matthew Lamanna, assistant curator at the Carnegie Museum of Natural History, said *T. rex* most likely was covered in both feathers and scales.

Whatever the coverage of [feathers](#), the latest fossil finds "force us to conceive of tyrannosauroids in a new way," said Julia Clarke at the University of Texas at Austin.

More information: [www.nature.com/nature/journal/ ...ull/nature10906.html](http://www.nature.com/nature/journal/...ull/nature10906.html)

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