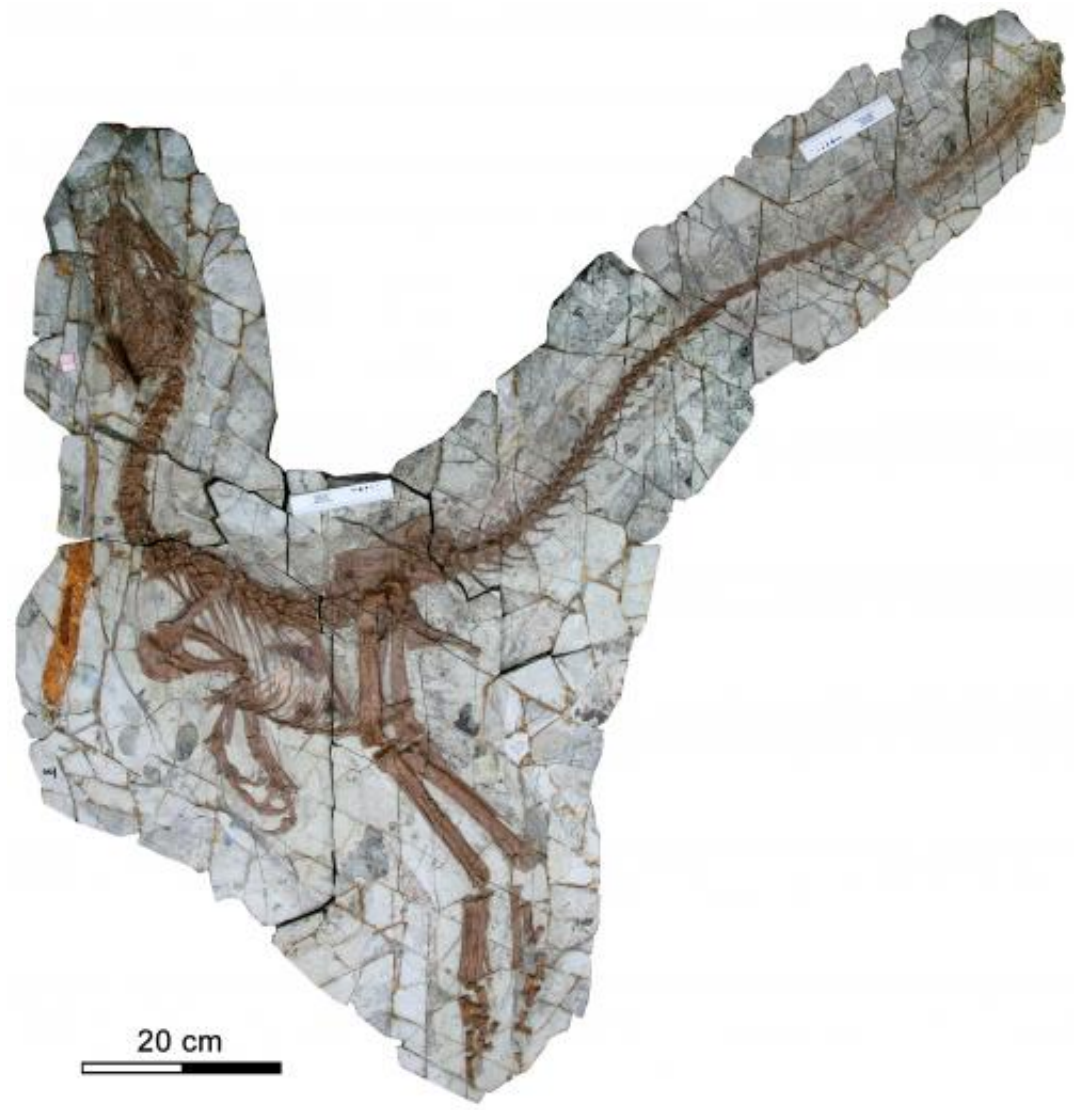
Rare find: Feathered dinosaur feasts on flying food

August 29 2012



Holotype of Sinocalliopteryx gigas. Credit: *PLOS ONE* 7(8): e44012. doi:10.1371/journal.pone.0044012

University of Alberta researchers found evidence that a feathered, but flightless dinosaur was able to snag and consume small flying dinosaurs.

The U of A paleontology team found the fossilized remains of three flying dinosaurs in the belly of a raptor-like predator called *Sinocalliopteryx*. *Sinocalliopteryx* was about two meters in length and roughly the size of a modern-day wolf.

Sinocalliopteryx's flying meals were three *Confuciusornis*. *Confuciusornis* was one of the earliest birds and had a crude version of a modern bird's skeleton and muscles. The researchers say such primitive birds were probably limited to slow take-offs and short flights.

According to the researchers, this is the first time a predator has been linked to the killing of multiple flying dinosaurs.

Scott Persons, a U of A paleontology student and research coauthor, says *Sinocalliopteryx* may have used stealth to stalk the flyers. "*Sinocalliopteryx* didn't have wings or the physical tools needed to be an adept tree climber," said Persons.

Persons explains *Sinocalliopteryx* had feathers or hair-like fuzz covering its body creating a level of insulation that helped maintain a warm body temperature and high metabolism that required a lot of food to fuel.

"The fact that this *Sinocalliopteryx* had, not one, but three undigested birds in its stomach indicate it was a voracious eater and a very active hunter," said Persons.

This find was made in China's Liaoning province, and U of A researchers analyzed stomach contents of a second *Sinocalliopteryx* fossil discovery from that area. The researchers identified this *Sinocalliopteryx*'s last meal as a *Sinornithosaurus*, a small feathered meat-

eater about the size of a house cat that may have been able to fly or glide short distances.

"*Sinornithosaurus* is a relative of Velociraptor which means this is the first direct evidence of a raptor becoming another predatory dinosaur's meal," said Persons.

The research was published Aug. 29 in the journal *PLoS ONE*.

More information: Xing L, Bell PR, Persons WS IV, Ji S, Miyashita T, et al. (2012) Abdominal Contents from Two Large Early Cretaceous Compsognathids (Dinosauria: Theropoda) Demonstrate Feeding on Confuciusornithids and Dromaeosaurids. *PLOS ONE* 7(8): e44012. doi:10.1371/journal.pone.0044012 .
dx.plos.org/10.1371/journal.pone.0044012

Provided by University of Alberta