

## Feathery Four-winged Dinosaur Fossil Found In China Bridges Transition To Birds

ScienceDaily (Sep. 29, 2009) — A fossil of a bird-like dinosaur with four wings has been discovered in northeastern China. The specimen bridges a critical gap in the transition from dinosaurs to birds, and reveals new insights into the origin evolution of feathers.

The transition from dinosaurs to birds is poorly understood because of the lack of well-preserved fossils, and many scientists argue that bird-like dinosaurs appear too late in the fossil record to be the true ancestors of birds.

In the journal *Nature* this week, Xing Xu and colleagues describe an exceptionally well-preserved fossil of *Anchiornis huxleyi* from the province of Liaoning, China. Long feathers cover the arms and tail, but also the feet, suggesting that a four-winged stage may have existed in the transition to birds.

*Anchiornis huxleyi* was previously thought to be a primitive bird, but closer inspection reveals that it should be assigned to the *Troodontidae* — a group of dinosaurs closely related to birds.

The authors date the fossil to the earliest Late Jurassic, meaning that it is the oldest bird-like dinosaur reported so far, and older than *Archaeopteryx*, the earliest known bird.

They conclude that the presence of such a species at this time in the fossil record effectively disputes the argument that bird-like dinosaurs appeared too late to be the ancestors of birds.



Top: Fossil of *Anchiornis huxleyi* from the province of Liaoning, China. Bottom: Artist's rendering. (Credit: Xing Xu)

### Journal reference:

.. Dongyu Hu, Lianhai Hou, Lijun Zhang, Xing Xu. **A pre-*Archaeopteryx* troodontid theropod from China with long feathers on the metatarsus.** *Nature*, 2009; DOI: [10.1038/nature08322](https://doi.org/10.1038/nature08322)

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