

# New Bird Fossil Hints at More Undiscovered Chinese Treasures

March 25 2010

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(PhysOrg.com) -- The study of Mesozoic birds and the dinosaur-bird transition is one of the most exciting and vigorous fields in vertebrate paleontology today. A newly described bird from the Jehol Biota of northeast China suggests that scientists have only tapped a small proportion of the birds and dinosaurs that were living at that time, and that the rocks still have many secrets to reveal.

"The study of Mesozoic birds is currently one of the most exciting fields; new discoveries continue to drastically change how we view them," said Jingmai O'Connor, lead author of the study. The article appeared in the March issue of the [Journal of Vertebrate Paleontology](#).

The new bird, named "*Longicrusavis houi*," belongs to a group of birds known as ornithuromorphs (*Ornithuromorpha*), which are rare in rocks of this age. Ornithuromorphs are more closely related to modern birds than are most of the other birds from the Jehol Biota.

"*Longicrusavis* adds to the magnificent diversity of ancient birds, many of them sporting teeth, wing claws, and long bony tails, that recently have been unearthed from northeastern China," said Luis Chiappe, a co-author of the study.

Along with a bird described five years ago, *Longicrusavis* provides evidence for a new, specialized group of small birds that diversified during the Early Cretaceous between about 130 and 120 million years ago.

"The new discovery adds information not only on the diversity these birds, but also on the possible lakeshore environment in which this bird lived," said co-author Gao Ke-Qin.



The legs of this new species are unusually long, suggesting that it spent much of its time wading in the shallows of ancient lakes. The name "*Longicrusavis*" means "long-shin bird," highlighting this important aspect of the new specimen. The presence of ancient birds in this habitat suggests that modern birds might have originated from an ancestor that was adapted for life near rivers and lakes.

Previously undescribed feather impressions from a closely related species suggest that both it and *Longicrusavis* had a long, fan-shaped tail. These are the oldest species to have such a tail, which likely increased flying performance.

The rocks of the Yixian Formation of northeast [China](#) have produced a spectacular array of fossils in recent years including fishes, [birds](#), mammals, invertebrates, and dinosaurs. These fossils are collectively known as the Jehol Biota and they are remarkable because, in many instances, they preserve soft tissues such as feathers or hair in addition to teeth and bones.

"The Jehol Biota never fails to stop giving, and the research to be done on these fossils is virtually endless!" said O'Connor.

**More information:** O'Connor, J. K., K-Q Gao, and L. M. Chiappe. 2010. A new ornithuromorph (Aves: Ornithothoraces) bird from the Jehol Group indicative of higher-level diversity. *Journal of Vertebrate Paleontology* 30(2).

Provided by Society of Vertebrate Paleontology

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