

Kid's KOrner

Prehistoric Creature Believed To Be World's Oldest Bird

POST, Texas — Brilliantly colored winged creatures the size of crows, with teeth in their beaks and long, bony tails, might have adorned the skies over this area 225 million years ago.

Evidence of their existence has been uncovered recently in the form of fossil bones excavated from a mudstone quarry near Post, a town in western Texas.

Found by a team of scientists led

by Sankar Chatterjee, a paleontologist from Texas Tech University, the fossils may shed new light on the early origin and diversity of birds.

Chatterjee says the bones belonged to the world's oldest birds, a new genus that he plans to name Protoavis, or ancestral bird. The scientists found fossils of at least two birds, an adult and a smaller juvenile.

Birdlike Features

The fossils include hollow bones, a wishbone, a breastbone with a keel, a skull with avian features such as wide eye sockets, and a large brain case. Although feather impressions weren't found with the Texas fossils, a forearm and hand show a series of nodes or bumps to which feathers were attached, says Chatterjee.

"The Protoavis bones are at least 75 million years older and more birdlike than Archaeopteryx, heretofore considered the earliest forerunner of today's birds," he says.

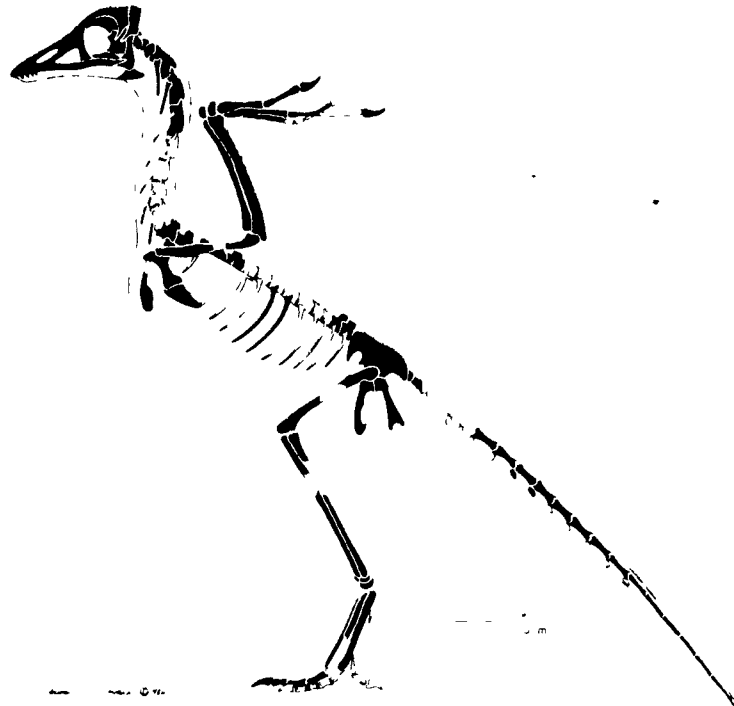
Discovered in a limestone quarry in Bavaria, Germany, in 1861, Archaeopteryx's skeleton, embedded in a stone slab, showed a strange, partly feathered creature with the characteristics of both bird and reptile.

Archaeopteryx had the type of large wishbone that aids powered flight, but it might have lacked the hollow bones and keel-like breastbone that enable birds to soar through the sky. Powerful wing beats, making sustained flight possible, depend on two sets of muscles attached to the deep keel of the breastbone.

Found just two years after the publication of Charles Darwin's "On the Origin of Species by Means of Natural Selection," Archaeopteryx was hailed as the missing link between reptiles and birds and became one of the crown jewels of paleontology.

It has inspired countless scientific meetings and papers and has often been the center of controversy because of its strange mixture of avian and reptilian features.

Both Archaeopteryx and Chatterjee's Protoavis have a pelvis and hind legs that resemble those of a small dinosaur. The



Artist's drawing shows recovered fossil bones (dark areas) of what is described as the world's oldest bird, which paleontologist Sankar Chatterjee will name Protoavis.

strong hind legs enabled the creatures to run as well as fly.

Dinosaur Ancestors

Most scientists trace the ancestry of birds to a small, meat-eating, fast-running dinosaur. Protoavis strengthens the evolutionary relationship between dinosaurs and birds, Chatterjee says. Like Archaeopteryx, Protoavis had other prominent reptilian features such as clawed fingers, a tail, and teeth. Modern birds are toothless.

But, Chatterjee maintains, "There's a big difference between the two early birds. Protoavis displays more birdlike bones and

already has lost the teeth in the back part of its jaw, indicating that it was more advanced than Archaeopteryx. This will lend support to those who feel that Archaeopteryx was already on a side branch of avian evolution in the Upper Jurassic period some 75 million years later."

Teeth and the strong jaws necessary to support them are heavy, and evolving birds needed reduced weight for efficient flying. Chatterjee contends that Protoavis, although not a long-distance flier, could easily have flown from tree to tree and

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Paleontologist Sankar Chatterjee excavates a Texas site for fossils dating from about 225 million years ago. Among his finds have been evidence of the world's oldest birds as well as dinosaur-like creatures and mammal-like reptiles.

COLOR THIS!

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|-------------|---------------|
| 1. BLACK | 6. ORANGE |
| 2. RED | 7. GREEN |
| 3. YELLOW | 8. LT. BROWN |
| 4. LT. GREY | 9. LT. BLUE |
| 5. BROWN | 10. LT. GREEN |

ASBESTOS: THE WORD "ASBESTOS" COMES FROM THE GREEK WORD THAT MEANS "WILL NOT BURN." ANOTHER NAME FOR IT IS "COTTON STONE." CHARLEMAGNE HAD A TABLE CLOTH MADE OF ASBESTOS, TO CLEAN IT HE THREW IT INTO A FIRE. THE FIRE BURNED ALL THE GREASE THAT HAD SPILLED ON IT WITH NO DAMAGE TO THE CLOTH.

