

World renown paleontologist Dr. Phil Currie presents lecture at RMDRC

by Sheila J. Nevinczenko

Forget the chicken and the egg. A more relevant question is: What came first -- the bird or the feather? Many fascinating specimens in the fossil record have provided evidence in the debate over the bird/dinosaur connection.

“Feathered Dinosaurs and the Origin of Birds” was the subject of a lecture given by world-renown paleontologist, Dr. Phil Currie on Sunday, November 7 at the Ute Pass Cultural Center in Woodland Park. The event was sponsored by the Rocky Mountain Dinosaur Resource Center. The subject has become a favorite of Dr. Currie’s whose latest book **"Feathered Dragons: Studies on the Transition from Dinosaurs to Birds"** was released in April. □

Dr. Currie explained that in the 1870’s most scientists believed birds were closely related to dinosaurs based upon a bone-by-bone analysis. The problem was that wishbones had not been found in dinosaurs, or so it was thought. The wishbones (also called clavicles or furcula) were there all along, but had been misidentified. “It was easy to confuse because the wishbones were small,” said Dr. Currie. In the 1970s, the search began for dinosaur wishbones and it was found they were right there (in the museum specimens) all along. A dozen tyrannosaurs were found with wishbones. Oviraptor and Dromaeosaurus among others are also very birdlike. “Bone for bone the similarities are absolutely amazing,” said Dr. Currie.

Three recent discoveries of feathered dinosaurs in China rocked the Paleontology world. Dr. Currie saw a fossil of Sinosauropteryx in 1996 with clear impression of downy insulation. He said, “I was absolutely floored. It was the real McCoy.” This story made the front page of the New York Times and Currie said, “it became a focus of enormous controversy.”

The discovery of Caudipteryx in 1997 was “the turnover point ... because it had a wonderful combination of characteristics,” said Dr. Currie. It had feathers behind the arms and at the end of the tail like a modern bird.

Three months ago Dilong – a small tyrannosaur – was found with feather-like impressions. To date, Dr. Currie said, five families of meat eating dinosaurs are known to have had feathers. “I have come to believe that birds came from dinosaurs,” he said.

When you can only separate these animals (the dinosaurs from the birds) by the presence of feathers you can say they are closely related, said Dr. Currie. The dinosaur/bird relationship is virtually definitive after reviewing 125 characteristics unique to birds.

One of the most important similarities would be their one-way system of breathing.

“Birds have a very unique way of breathing,” Dr. Currie said. “They are always exchanging carbon dioxide and oxygen.” They have small air-filled tubes in their hollow skeletons. Tyrannosaurs have such hollow, air-filled bones.

The feathered dinosaur specimens found so far were not capable of flight. For the most part their feathers were downy and are being referred to as “protofeathers.”