

FEATHERED DINOSAURS FROM CHINA

18

P.J. CURRIE

Royal Tyrrell Museum of Palaeontology, Box 7500, Drumheller, T0J 0Y0 Alberta, Canada
e-mail: PCurrie@mcd.gov.ab.ca

In recent years, some of the most significant specimens for understanding the evolution from dinosaurs to birds have been recovered from the Lower Cretaceous rocks (120 to 145 million years old) of northeastern China. These include as many as 1,000 specimens of the primitive bird *Confuciusornis*, and a dozen skeletons of at least three species of dinosaurs with feathers. *Sinosauropteryx* is closely related to *Compsognathus*, one of the smallest dinosaurs known. However, it had a longer tail and shorter arms, and downy feathers insulated its body. *Protarchaeopteryx* was a small but long legged runner that possessed stiff feathers at the end of its long bony tail. *Caudipteryx* represents another cursorial animal, with well-developed feathers on the arms and tail. In contrast with *Archaeopteryx* and other flying birds, the feathers are symmetrical in both of these species. Feathers were probably widely distributed amongst meat-eating dinosaurs, and we can no longer be sure that fossilized feathers found in Cretaceous rocks all belong to birds. The two distinct types of feathers associated with these animals suggest that feathers evolved from a simple branching structure that became progressively more complex, and that they were initially used for insulation and display. The evidence favors the theory that flight evolved from the ground up.

**In “The New Panorama of Animal Evolution” p.18
XVIIIth International Congress of Zoology, Book of Abstracts.
Athens, Greece. 2000. Hellenic Zoological Society.**