

## Preface

### In memory of Larry Dean Martin (1943–2013)

Larry Martin's glorious life and career came to a premature end on March 9, 2013 at the age of 69. He was truly a rare, well-rounded, and great paleontologist. He published about 400 scientific contributions, including over 250 peer-reviewed papers that cover such a wide range of fields as avian fossils and evolution, Quaternary paleoenvironments and community evolution, paleoclimate and evolution, fossil rodents and carnivores, fossil history of bone disease, and Plains Indians.

Despite his broad interest and encyclopedic knowledge of paleontology, his most important contribution is probably on the study of early avian evolution. His pioneering works, since the 1980s, on anatomy and systematics of the enantiornithine birds and many other early avian lineages had made him a leading expert on the Mesozoic birds. He had proposed a hypothesis on the shore environmental origin of ornithurines, which was largely corroborated by later fossil discoveries and studies.

He was one of the few vertebrate paleontologists who have actively participated in the studies of the revolutionary discoveries of Early Cretaceous birds from the Jehol Biota in Liaoning, China, which have resulted in many joint publications between him and his Chinese colleagues in prominent journals.

Larry's interest and study on the origin of birds also made him one of the major figures in the great debate on whether birds were derived from dinosaurs. Martin was once well known as a major advocate of the hypothesis of birds originating from basal archosaurs. Although the dinosaurian origin of birds has been the dominating hypothesis in recent years thanks to the discovery of many bird-like theropods, particularly the feathered dinosaurs from China, yet Larry never seemed to be bothered or disappointed. On the contrary, he always welcomed the new fossil discoveries and any progress in the field with a keen interest and open mind while striving to challenge the prevailing hypothesis by providing his own evidence and explanations. I believe such a debate had indeed helped stimulate the interest of both researchers and the public on this important scientific topic. Science progresses in the process of the debate, and Larry had earned his reputation and respect among his peers by being an ardent, articulate, and artful debater!

I was fortunate to study at the University of Kansas during 1995-1999 as a PhD student supervised by Martin. Over the years, I have been greatly impressed by his photographic memory, encyclopedic knowledge, and his broad collaborations with scientists from a variety of scientific disciplines.

I was also amazed by his knowledge in nearly all groups of vertebrates by sitting in his classes such as Mammal Bone Identification, Vertebrate Evolution, and Human Evolution. Admittedly, to tell the difference between two rodent families was indeed a challenge and headache for me, as a student on fossils birds, during the term examination of his class, but I did learn a lot.

Larry had a long and strong connection with his Chinese colleagues and he loved Chinese culture, especially Chinese cuisines. In earlier days, he hosted some distinguished Chinese colleagues such as Tungsheng Liu, a well-known Quaternary geologist, and Minchen Chow, a well-known paleomammalogist, at his home. He mentored two Chinese students: Xiaoming Wang and I. Xiaoming is now a curator of fossil mammals at the Los Angeles County Museum of Natural History, and I returned to China in 1999 after I earned my PhD degree.

Personally, Larry was very kind and generous to me, and he put me up for two months when I first arrived at KU as a graduate student. And he often invited me to dinners and coffees. During my four years at KU, I also particularly enjoyed the unique lunch hour or coffee breaks in my office in the basement, where Larry, Desui Miao, and I could chat about everything. I believe my English improved a lot thanks to this unusual "class".

Larry's collaborations with his Chinese colleagues on the Mesozoic birds started in the early 1990s. Lianhai Hou and I worked with him and Alan Feduccia on the first specimen of *Confuciusornis* that resulted

in a paper published in *Nature*, and our collaborations on more fossils brought to fruition another paper on the early avian adaptation in *Science*.

After *Sinosauroptryx* had been discovered in China in 1996, Larry joined John Ostrom and two other paleontologists to form the so-called “dream team” to visit China in 1997 to study the then “controversial” fossil in order to determine whether or not its presumed proto-feathers are homologous to bird feathers.

In the past ten years, Larry traveled to China every few years, and continued his collaboration with my team in China. Most recently, we reported the earliest known avian crops from the Jehol Biota and published a paper on the distribution of the predeontary bone in ornithurine birds.

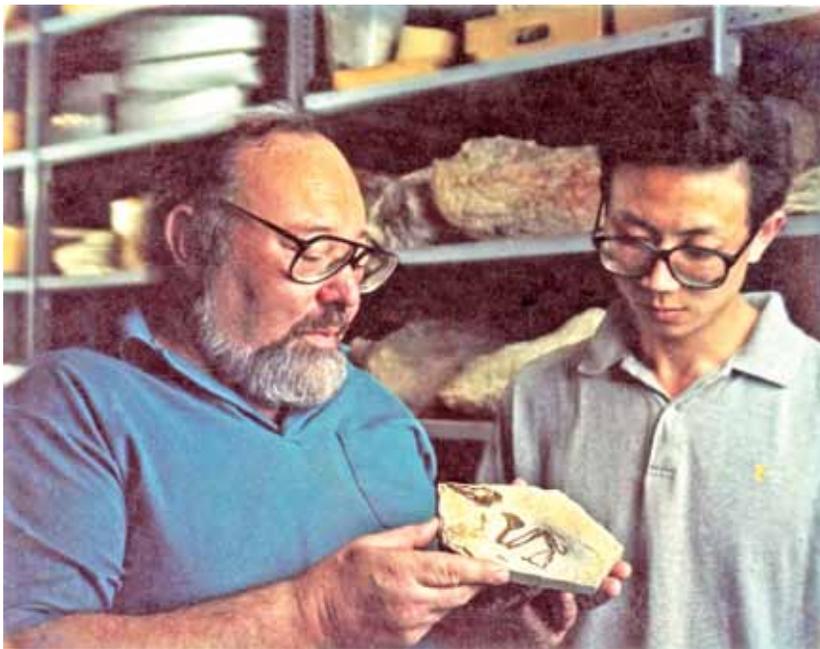
In addition to collaborations on early birds, Larry also worked with his Chinese colleague Enpu Gong and other colleagues on the flight model of the four-winged *Microraptor*, and they also published their discovery of evidence of possible venomous dinosaur.

Larry was a brilliant scholar, with a wide range of interest, from science to history, religion, linguistics, culture, and many other fields. He was also a fun-loving man with an open mind. I believe he truly enjoyed the diversity of culture, life, and scientific opinions. Despite being one of his former students, my work on the early evolution of birds and the origin of bird flight has always been in the framework of the dinosaurian origin of birds. We might disagree on scientific issues, yet we agree to disagree and hence always respect each other’s work.

Larry was also a family man. I know he enjoyed cooking for his family (and friends) and walking dogs. Desui Miao told me that he had once seen Larry weeping in the office for one of Larry’s beloved dogs just died of old age. He was also kind to his students and visitors. He enjoyed the company of many friends and collaborators, including a lot of amateur paleontologists and journalists, and lived life to the fullest.

Larry’s death has left huge hole in our lives, yet his intellectual legacy will live on. I still remember once he came to China and found his luggage missing at the airport, I was really worried, but he comforted me with his trademark big smile and said to me: “I’d never worry about things that are out of my control”, which has since become a motto for me.

ZHOU Zhong-He



Larry Martin (left) and Zhou Zhonghe at the University of Kansas in 1995