DIGGING UP THE PAST: DINOSAUR RESEARCH EXPERIENCE AT HKU

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Profile

- Member of Vertebrate Palaeontology Laboratory 2015-2017 (Department of Earth Sciences, HKU)
- Summer Research Fellowship 2015 (Department of Earth Sciences, HKU)
- Overseas Research Fellowship 2016 (Institute of Vertebrate Paleontology and
- Paleoanthropology, Chinese Academy of Sciences)
- Ecology & biodiversity field course 2016 (2-week marine mammal field trip in Cebu, Philippines)
- Integrated field studies 2017 (3-week geology field trip in Montana, USA)

"In 2015, I joined the Vertebrate Palaeontology Laboratory as a student member after expressing my interest in palaeontology to Dr Michael Pittman. Since then, Dr Pittman has provided me with numerous opportunities to take part in research projects and outreach activities. In the summer of 2015, I travelled to Beijing and various places in Inner Mongolia as part of the filming crew of the HKU free online course 'Dinosaur Ecosystems'.

I had my first-ever palaeontological expedition in the Gobi Desert of Inner Mongolia. Despite the hot weather, I had fun digging fossils in the desert with professional palaeontologists. They taught me basic animal anatomy so that I would be able to identify which part of the body an isolated bone belongs to. A wide variety of fossils were discovered at the field site, including remains of dinosaurs, crocodiles, fishes and turtles.

Following the fieldwork, I conducted my first summer research project in Beijing — I worked on some undescribed dinosaur specimens provided by Prof Xu Xing, a renowned palaeontologist from the Institute of Vertebrate Paleontology and Paleoanthropology (IVPP). I used laser-stimulated fluorescence (LSF) imaging technique to improve the visibility of the dinosaur bones preserved in rock slabs. The images taken with this technique allowed palaeontologists to observe the fossil anatomy more easily and accurately.

In 2016, I did my second summer project under the supervision of Prof Xu and Dr Pittman. I completed the first in-depth description of the toothless jaw of a giant bird-like dinosaur Gigantoraptor and provided some new insights into the functional evolution of oviraptorosaur jaw. This specimen was discovered in 2006 and was noted for its unusual size and anatomical characteristics. I visited the Longhao Institute of Geology and Paleontology in Inner Mongolia to study the holotype of Gigantoraptor. As part of the project, I also had the opportunity to study some of the most important dinosuar specimens from China in IVPP for comparative study. Besides, I constructed 3D models of the specimens using photogrammetry software.

During the research trip, I was trained to work independently and manage my time well. As a visiting student, I made friends with the postgraduate students and researchers in the Institute. They have given me a lot of insightful advice which would definitely help improve my research project. Overall, my research experience at HKU was fun and eye-opening. It has motivated me to continue my research career in palaeontology in the future."

"All of this experience has made me more certain to pursue a PhD degree to fulfill my dream of becoming a palaeontologist."