



Contents lists available at ScienceDirect

# Quaternary International

journal homepage: [www.elsevier.com/locate/quaint](http://www.elsevier.com/locate/quaint)

## Zhoukoudian in transition: Research history, lithic technologies, and transformation of Chinese Palaeolithic archaeology

Chen Shen <sup>a, b, \*</sup>, Xiaoling Zhang <sup>a, \*\*</sup>, Xing Gao <sup>a</sup><sup>a</sup> Key Laboratory of Vertebrate Evolution and Human Origins at the Institute of Vertebrate Paleontology and Paleoanthropology, Chinese Academy of Sciences, 142 Xizhimenwai Street, Beijing 100044, China<sup>b</sup> Royal Ontario Museum, 100 Queens Park, Toronto, Ontario M5S 2C6, Canada

### ARTICLE INFO

#### Article history:

Available online 28 November 2015

#### Keywords:

Zhoukoudian  
Lithic technologies  
Pleistocene archaeology  
Human evolution  
China

### ABSTRACT

Zhoukoudian, near Beijing, is where the *Homo erectus* *Sinanthropus pekinensis* (Peking Man) fossils were found in the 1920s, and has always been a focus for studies of Palaeolithic archaeology in China. This paper discusses two aspects of Zhoukoudian in transition: research histories and lithic technologies. From a historical perspective, the study considers the change in research paradigms and perspectives to examine how research at Zhoukoudian has transformed Chinese Palaeolithic archaeology in the last two decades. This paper will give an overview on lithic assemblages at Zhoukoudian to illustrate the complexity of lithic industries in North China, which are not yet fully understood. In conclusion, the study suggests more research problems rather than prestige collections that were inherited by the current generation of scholars, who call for careful reviews of valuable historic data, including lithic, faunal, sediment, and human remains, before any further interpretations are produced. This study suggests that lithic industries in transition at Zhoukoudian can provide another line of evidence to support the continuous development of Pleistocene hominid evolutions, especially leading to the origins of modern humans in China.

© 2015 Elsevier Ltd and INQUA. All rights reserved.

### 1. Introduction

In June 2009, a new long-term excavation project at Locality 1 was begun, marking a new era in a century-long history of field investigations at Zhoukoudian (aka Chou-Kou-Tien) (Zhang et al., 2016). The objectives of this excavation were very different from those of earlier excavations, conducted more than 85 years ago, when simply searching for *Homo erectus* remains was the focus of excavators (Jia and Huang, 1990; Boaz and Ciochon, 2004). The goals of the new investigations at Zhoukoudian Locality 1 are (1) to stabilize and prevent the section profile of the west wall deposits from further erosion that may cause great danger of collapse; (2) to preserve and make the site more accessible for research and educational engagement by future generations of students; (3) to conduct systematic geomorphological sampling and multi-

disciplinary analyses to obtain new insights of site formation, site use, and chronological dating; and (4) to search for new evidence of hominid behaviours as evinced by fossil remains, ecofacts, and artifacts (Fig. 1).

The transition, from the single-minded objective of simply finding *Homo erectus* at Zhoukoudian to a project with multi-faceted purposes dedicated to preservation, education, and interdisciplinary study on this 1987-inscribed UNESCO World Heritage Site, has been a painstaking experience for three generations of Palaeolithic archaeologists in China. The transition also demonstrates dramatic changes for Chinese Palaeolithic archaeology in terms of shifts in research paradigms, methodologies, data managements, and interpretations. What is more significant for our understanding of research at Zhoukoudian is that we broaden our investigations from a single important site, such as the Peking Man site, to a suite of sites/localities that may represent a regional perspective on the evolution and transition of hominid behaviours. Zhoukoudian, where a total of 27 localities have been identified so far, is more than just a home-base or playground of *Homo erectus* and their contemporary primates.

The Peking Man site alone, in which 40 m of deposits accumulated that contained cultural evidence and the remains of more

\* Corresponding author. Key Laboratory of Vertebrate Evolution and Human Origins at the Institute of Vertebrate Paleontology and Paleoanthropology, Chinese Academy of Sciences, 142 Xizhimenwai Street, Beijing 100044, China.

\*\* Corresponding author.

E-mail addresses: [chens@rom.on.ca](mailto:chens@rom.on.ca) (C. Shen), [zhangxiaoling@ivpp.ac.cn](mailto:zhangxiaoling@ivpp.ac.cn) (X. Zhang).

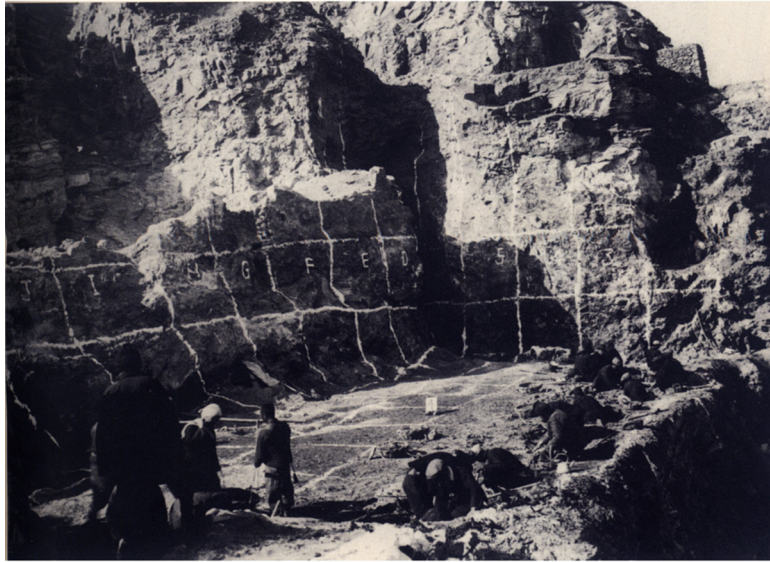


Fig. 1. Excavations at Zhoukoudian Locality 1, the Peking Man site in the past (left top b/w) and at present.

than 40 individuals of *Homo erectus*, witnessed changes in hominid behavior over a half million year time span of the Middle Pleistocene. In general, the remains were divided into at least three cultural periods of the cave's occupation, with the lowest layers dated as early as 780,000 years ago (Shen et al., 2009). Most English-language publications dealing with the Zhoukoudian Peking Man site focus on dating, climate context, studies of hominid and carnivore remains and site taphonomy, and on sediments with fire

ashes (Binford and Ho, 1985; Binford and Stone, 1986; Grün et al., 1997; Weiner et al., 1998; Boaz et al., 2000; Zhou et al., 2000; Goldberg et al., 2001; Shen et al., 2001, 2004; Boaz et al., 2004; Wu et al., 2010; Zhang et al., 2014; Zhong et al., 2014). Much less attention has been paid to the abundance of stone tools recovered from almost all excavation levels of the deposits. Hominid behavioural evidence cannot be fully understood until lithic assemblages are carefully and systematically examined; and it is now clear that

Download English Version:

<https://daneshyari.com/en/article/1040208>

Download Persian Version:

<https://daneshyari.com/article/1040208>

[Daneshyari.com](https://daneshyari.com)