


Provided by the author(s) and University College Dublin Library in accordance with publisher policies. Please cite the published version when available.

|                              |  |
|------------------------------|--|
| Title                        | Archaeological investigations in northern Laos : new contributions to Southeast Asian prehistory |
| Author(s)                    | White, Joyce C.; Lewis, Helen; Bouasisengpaseuth, Bounheuang; Marwick, Ben; Arrell, Katherine    |
| Publication date             | 2009-03  |
| Publication information      | Antiquity, 83 (319): [online]  |
| Publisher                    | Antiquity Publications   |
| Link to online version       | <a href="http://antiquity.ac.uk/projgall/white/">http://antiquity.ac.uk/projgall/white/</a>      |
| Item record/more information | <a href="http://hdl.handle.net/10197/2958">http://hdl.handle.net/10197/2958</a>                  |

Downloaded 2018-07-20T04:47:26Z

The UCD community has made this article openly available. Please share how this access benefits you. Your story matters! (@ucd\_oa) 

Some rights reserved. For more information, please see the item record link above.



## Archaeological investigations in northern Laos: new contributions to Southeast Asian prehistory

Joyce C. White, Helen Lewis, Bounheuang Bouasisengpaseuth,  
Ben Marwick & Katherine Arrell

### Introduction



Figure 1. Map of northern Lao PDR showing major features and locations of selected sites.  
[Click to enlarge.](#)

The Middle Mekong Archaeological Project (MMAP) was designed to investigate the prehistoric archaeology of the Luang Prabang region, which, although centrally located in mainland Southeast Asia, has seen little previous archaeological research (Figure 1; White & Bouasisengpaseuth 2008). The Mekong has long been thought to be an ancient highway for peoples, technologies and cultures, but due to historic political conditions, vast stretches of it remained inaccessible to modern archaeology until the 1990s.

Previous research suggested that the Mekong basin around Luang Prabang was rich in archaeological remains dating throughout the Holocene, and possibly back into the late Pleistocene (e.g. Sayavongkhamdy *et al.* 2000). A MMAP exploratory survey in 2005 found 58 archaeological sites in three Mekong tributary basins upstream of Luang Prabang city, 38 of which are caves and/or rockshelters (White & Bouasisengpaseuth 2008). A programme of testing the potential of the cave sites was established, entailing the initial exploration of one site on each Mekong tributary stream, chosen on the presence on the surface of both flaked lithics and cord-marked sherds, and location near currently arable land. A primary aim is to find deposits dating to the middle Holocene (6000-2000 BC), a period during which agricultural societies, and, later, metallurgy were likely to have come into the region. We also aim to establish an archaeological training programme for cultural resource management professionals with the Department of Heritage, Lao PDR. So far, two sites have produced interesting and important dates, which are the focus of this short paper.



**Figure 2.** Excavations at Phou Phaa Khao Rockshelter.  
*Click to enlarge.*

### Excavations

Test excavations were conducted at Phou Phaa Khao Rockshelter (PPKR; Figure 2) in the Khan Basin in 2007, and at Tham Vang Ta Leow (TVTL; Figure 5) Rockshelter in the Pa Basin in 2008. These sites are located in karstic formations overlooking swidden fields, and in the case of TVTL, also inundated rice fields (Figure 6).

At PPKR, a 1x2m trench was excavated to a depth of nearly 1m. Bedrock was not reached within the excavation season. Portions of seven human burials were uncovered in the deposit; the material recovered included 2306 stone flakes, 21 cores (Figure 3) and 393 pottery sherds. Preliminary examination of flaked artefact attributes at PPKR indicates similarities to Hoabinhian technologies from north-west Thailand (Marwick 2008). Near the base of excavations, an intact burial of a juvenile (Figure 4) included an iron digging stick tip *in situ* under one arm. A date from a tooth from this burial indicates a late Iron Age interment (Table 1). A polished stone adze was also found near this burial but no grave cut was identified so it is not certain that the adze was a grave good. It appears that these Iron Age and possibly later burials were cut into and disturbed earlier deposits represented by the lithics.



**Figure 3.** Typical Hoabinhian cores from Phou Phaa Khao Rockshelter. Scale = 10cm.  
*Click to enlarge.*



**Figure 4.** Iron Age Burial 5 at Phou Phaa Khao Rockshelter. Note iron digging stick tip under right forearm.  
[Click to enlarge.](#)

| Sample no.  | Conventional radiocarbon age (yr. BP) | 2 $\sigma$ calibration AD/BC                | $^{13}\text{C}/^{12}\text{C}$ | Material         | Analysis                         | Provenience   |
|-------------|---------------------------------------|---|-------------------------------|------------------|----------------------------------|---|
| Beta-233686 | 1780 $\pm$ 40 BP                      | AD 130-350                                  | -20.7                         | Tooth            | AMS; collagen extraction; alkali | PPKR Burial 5, c. 1m below site surface, context 26   |
| Beta-243649 | 9450 $\pm$ 60 BP                      | 9110- 8610 BC (inclusive of all intercepts) | -23.6                         | Charred material | AMS; acid/alkali/acid            | Trench A, Feature 1 of Layer 22; 1.10m below surface, from one of four charcoal clusters; bag TVTL-133, context 29                        |
| Beta-243647 | 9580 $\pm$ 60 BP                      | 9220-8750 BC                                | -26.5                         | Charred material | AMS; acid/alkali/acid            | Trench B, ash concentration Feature 1 of Layer 17; immediately overlies burning feature producing Beta-243648; bag TVTL-97, context 11=15 |
| Beta-243648 | 9770 $\pm$ 50 BP                      | 9300-9200 BC                                | -27.1                         | Charred material | AMS; acid/alkali/acid            | Trench B, from burning Feature 1 of Layer 20 immediately underlies feature producing Beta-243647; bag TVTL-128, context 19                |

**Table 1.** Radiocarbon dates from Phou Phaa Khao Rockshelter (PPKR) and Tham Vang Ta Leow (TVTL) in northern Laos.  
 Calibration according to INTCAL04 [*Radiocarbon* 46(3), 2004].

At Tham Vang Ta Leow two test pits were excavated: Trench A was 1x2m; it did not reach bedrock but was stopped at a depth of just over 1m. Trench B was 1x1m, and reached bedrock at a depth of c. 1m. Hoabinhian cores (n=67) and flakes (n=6107) were recovered in abundance, along with some pottery sherds (n=83). Three radiocarbon dates from the bases of the two pits (Table 1) demonstrate that the site has deposits from the Pleistocene/Holocene transition.



**Figure 5.** Excavations at Tham Vang Ta Leow.  
*Click to enlarge.*



**Figure 6.** View downhill from Tham Vang Ta Leow, showing typical landscape, Pa River and agricultural areas.  
*Click to enlarge.*

### **Implications and future research**

These data indicate that northern Laos was occupied from the terminal Pleistocene onwards, with clear evidence for occupation by users of Hoabinhian lithic technology. The dates from TVTL fit within the date range from Tam Hua Pu, and are slightly older than early Holocene dates reported from Phon Savan on the Plain of Jars, and Lao Pako (Sayavongkhamdy *et al.* 2000). They compare well with dates of Hoabinhian-related material from similar latitudes in northern Thailand (Treerayapiwat 2005) and Vietnam (Yi *et al.* 2008), and suggest that sites in Lao PDR can provide important comparative material for better-known areas of mainland Southeast Asia. In addition, the basic agreement of the three TVTL dates with each other, all coming from features in the same general stratigraphic position but in two trenches, suggests that the site contains sequential, undisturbed or well-stratified early materials, which is not necessarily the case in other Hoabinhian cave sequences.

The Iron Age presence indicated by the burials at PPKR is interesting in relation to what appears to be Iron Age activity in the Plain of Jars plateau (Colani 1935; Nitta 1996; Sayavongkhamdy *et al.* 2000), from which the Khan tributary drains. The date and material cultural association corresponds with other findings from Laos (Källén 2004; Karlström 2000; Sayavongkhamdy *et al.* 2000) and Thailand showing that this period in Southeast Asia was characterised by diverse land use and wide-ranging inter-regional contacts.

Future research will include test excavations along other tributaries in the study area, of both cave and open air sites, tying the MMAP survey results to excavation data to elucidate the prehistory of the Middle Mekong Basin near Luang Prabang, a key region in central mainland Southeast Asia.

## Acknowledgments

Funds and support for the Middle Mekong Archaeological Project have been provided by the National Science Foundation for the United States #0457056, National Geographic Society #7780-05, The Henry Luce Foundation Inc., University of Pennsylvania Museum, private donors, Department of Heritage Lao PDR, University College Dublin Seed Funding, the US Embassy in Laos and the Australian National University.

## References

- COLANI, M. 1935. *Mégalithes du Haut-Laos*. Paris: Ecole française d'Extrême-Orient.
- KÄLLÉN, A. 2004. *And through flows the river: archaeology and the pasts of Lao Pako* (Studies in Global Archaeology 6). Uppsala: Uppsala University.
- KARLSTRÖM, A. 2000. Lao Pako, an Iron Age site on Nâm Ngum River in Laos. *Bulletin of the Indo-Pacific Prehistory Association* 19: 85-92.
- MARWICK, B. 2008. Three styles of Darwinian evolution in the analysis of stone artifacts: which one to use in mainland Southeast Asia? *Australian Archaeology* 67:79-86.
- NITTA, E. 1996. Comparative study on the jar burial traditions in Vietnam, Thailand and Laos. *Historical Science Reports of Kagoshima University* 43: 1-19.
- SAYAVONGKHAMDY, T., P. BELLWOOD & D. BULBECK. 2000. Recent archaeological research in Laos. *Bulletin of the Indo-Pacific Prehistory Association* 19: 101-10.
- TREERAYAPIWAT, C. 2005. Patterns of habitation and burial activity in the Ban Rai rock shelter, northwestern Thailand. *Asian Perspectives* 44(1): 231-45.
- WHITE, J.C. & B. BOUASISENGPASEUTH. 2008. Archaeology of the Middle Mekong: introduction to the Luang Prabang province exploratory survey, in Y. Goudineau & M. Lorrillard (ed.) *New research on Laos/Recherches nouvelles sur le Laos*: 37-52. Vientiane & Paris: Ecole française d'Extrême-Orient.
- YI, S., J. LEE, S. KIM, Y. YOO & D. KIM. 2008. New data on the Hoabinhian: investigations at Hang Cho Cave, northern Vietnam. *Bulletin of the Indo-Pacific Prehistory Association* 28: 73-9.

## Authors

\* Author for correspondence

**\*Joyce C. White**

University of Pennsylvania Museum, Philadelphia, PA 19143, USA (Email: [banchang@sas.upenn.edu](mailto:banchang@sas.upenn.edu))

**Helen Lewis**

School of Archaeology, University College Dublin, Belfield, Dublin 4, Ireland (Email: [helen.lewis@ucd.ie](mailto:helen.lewis@ucd.ie))

**Bounheuang Bouasisengpaseuth**

National Museum, PO Box 122, Vientiane, Lao PDR (Email: [boun\\_heuang59@yahoo.com](mailto:boun_heuang59@yahoo.com))

**Ben Marwick**

Department of Anthropology, University of Washington, Box 353100, Seattle, WA 98195-3100, USA (Email: [bmarwick@u.washington.edu](mailto:bmarwick@u.washington.edu))

**Katherine Arrell**

School of Geography, University of Leeds, Leeds LS2 9J, West Yorkshire, UK

[Back to Top](#)