

BAN CHIANG AND CHARCOAL IN HYPOTHETICAL HINDSIGHT: A COMMENT

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This brief comment has been written for three reasons. Firstly, Dr. White kindly sent me a copy of her paper prior to publication, which gave me the opportunity to reflect on its contents before it appeared in print. Secondly, my suggestions on the collection of radiocarbon samples from sites such as Ban Chiang provided the starting point for her paper. Finally, I collected some of the Ban Chiang radiocarbon samples discussed by her.

I trust that the debate generated by my various calls for more discipline in the collection and submission of radiocarbon samples from Southeast Asian sites will soon be overtaken. Currently, I am discussing with Professor Harris the possibility of dating organic remains, such as rice chaff found in mortuary pots, on the Oxford University accelerator. If this technique proves viable, then we will have to wait for less than a century to see our various evaluations of the dating of such sites as Ban Chiang and Non Nok Tha put to the test and, doubtless in some cases, consigned to oblivion. I would greatly welcome such a cutting of the Gordian Knot even if it were my views which were proved in error.

Currently, however, we remain with a problem, to which White's paper is a welcome addition. It is to some of her points which I now turn. Firstly, it is written almost as if the active participants in the excavation were no longer able to comment. This is not the case. There are many people who excavated at Ban Chiang, who had discussions with Gorman on the stratigraphy and dating issues and who actually assembled the radiocarbon samples. Dr. J. Kennedy, for example, worked at the site for many months in 1975, and I have a video-recording of her collecting charcoal from a mortuary context. I also collected a number of samples in both years, and have a similar recording of myself collecting charcoal for dating. I also well remember encountering and indeed excavating the bronze working area in square D5. It would have been interesting had Dr. White assembled the views on the collection of samples from some of those who did so, and who were personally familiar with the excavation objectives of Gorman and Charoenwongsa at the time.

My own view on this point is clear, and I believe it is sustained by the subsequent submission of samples. We felt that the charcoal taken from the vicinity of a skeleton would date it. With the advantage of hindsight, and in no way being critical of one of the best-organised and conducted excavations I have ever been involved with, I now think that we were wrong.

White has ingeniously marshalled ethnographic evidence which lends support to the notion that charcoal found near the skeleton might well be contemporaneous with it. Indeed, it might. Equally, it might not. If we turn for a moment to another site, Khok Phanom Di, there is no doubt that the mortuary ritual involved feasting, with fires being lit at the edge of or near the grave at the time of interment. Many of our 18 radiocarbon samples from this site came from such ash and charcoal lenses, where the charcoal lay thick on the ground, mingled with ash. Given this situation, I would be even more cautious of scattered charcoal found in the grave matrix, because the act of digging through earlier interments, and therefore earlier ash concentrations, would only add possible confusion

to the interpretation of the dates. As it happens, the Khok Phanom Di series is, with two or three exceptions, consistent with the stratigraphy (Higham 1988).

If charcoal from the matrix of a grave were to be submitted for dating on the assumption that it reflects part of the mortuary ritual, then it would be necessary to have more than a few bits and pieces. I would be unhappy with anything less than a large and nucleated concentration. In a sense, the situation at Ban Chiang can be tested by listing the actual dates from mortuary contexts set against White's current overview of the site's chronological framework (Table 1). My view is that there are sufficient discrepancies and contradictions to urge extreme caution in pursuing this line of enquiry, even in the case of a site as beautifully excavated as was Ban Chiang. Take, for example, the dating of EP II, the period antedating the first bronze. White has assigned it over a millennium, from 3000-1900 B.C. This is a very long time for such a shallow deposit to accumulate. Two of the four mortuary dates from this context are earlier than this timespan, and two are considerably later. For EP III, when bronze was first encountered in a mortuary context, the single date available is a millennium later than White's proposed span of 2100-1700 B.C. The situation is only slightly improved for EP IV. We have only the one date which falls within a proposed span of five centuries from 1900-1400 B.C. Two determinations are much later, falling well outside the proposed dates, one is clearly too early and the other two conform reasonably well. For EP V there are four mortuary dates, and against the proposed timespan of 1600-900 B.C. we have one date which appears far too late, two which are somewhat early, and only one which matches the proposed chronological framework. The single date for MP VI bears no relationship to the the proposed bracket of 1100-700 B.C. For MP VII, one date is too late and one conforms with White's dating scheme. Finally, LP X, dated from 200 B.C. to 300 A.D., has one, out of a total of two, radiocarbon determination which is up to two millennia too early. White has, of course, considered all these contexts in considerable detail and the interested reader can consult her dissertation. The point made here is simply that, even if the deposition of charcoal were part of the mortuary rite at prehistoric Ban Chiang, the dates derived from burials are difficult to drill into any sort of shape.

From memory, the bronze working facility at Ban Chiang comprised a concentration of baked clay, ringed by flecks of bronze, crucibles and charcoal (see charcoal concentration iv in White's paper). There were lumps of charcoal located among the clay, as at Ban Na Di. Now, had a series of samples being taken and dated, this would have provided the central plank for dating burials sealed by it, and which overlay it. With the benefit of hindsight, this would have been a useful approach to the dating of the site.

White's comments on the generation and dispersal of charcoal in modern northeast Thai villages simply confirms the importance of a firm context when selecting material for dating. This concern for context follows from even the most casual observation of the way in which material moves through human or natural agency in a Thai village. How else would many sites be identified, other than through the recovery of prehistoric potsherds lying on a modern surface? Burning wood or charcoal below and well above the modern ground level is the norm rather than the exception. Salt preparation, kiln-firing of pottery vessels and charcoal-making involve subterranean burning just as do the "subsurface hearths" described by White. Readers who refer to her dissertation will find on pages 267-8 the statement that Kijngam and I collected charcoal at Ban Na Di from a "charcoal-rich midden lens located practically on the natural substrate" (Higham and

Context	White's framework	Actual dates, calibrated and expressed at 1 σ range
LP X	200 B.C.-300 A.D.	195-20, 2315-1710
MP VII	800-400 B.C.	420-380, 795-585
MP VI	1100-700 B.C.	1675-1220
EP V	1600-900 B.C.	1865-1365, 1430-865, 400-55 A.D., 1865-1365
EP IV	1900-1400 B.C.	1680-1225, 2340-1755, 1100-840 820-765, 1765-1340, 1545-1015
EP III	2100-1700 B.C.	820-395
EP II	3000-1900 B.C.	2205-1685, 3365-2535, 2205-1685, 3680-2910
EP I-II	pre 3000 B.C.	2215-1690

Table 1: The Ban Chiang radiocarbon dates from mortuary contexts set against White's proposed chronology for the site. All dates are calibrated and expressed at 1 σ range as B.C., unless noted as A.D.

Kijngam 1984:30, White 1986:267-8). She proceeds to suggest that we "did not consider the possibility of subsurface hearths which might explain why the younger date seems to be lower than the older date". It is my view that a competent excavator would be able to recognise a subsurface hearth without great difficulty, unless of course it was virtually obliterated in prehistory. In actual fact we did consider various possible derivations for the charcoal of all samples we took, and our initial diagnosis remains that favoured.

There are many issues upon which our judgement is influenced by chronological matters. One of these is that Ban Chiang is a type site for the Sakon Nakhon Basin. Another is that it was occupied for three to four millennia. I am unsure what White implies by the term "type site". Her dissertation was at pains to emphasise the differences between Ban Chiang material and the corresponding ceramics from Ban Na Di, only about 20 km distant. Most sites in the area with which I am familiar display considerable individuality in ceramic styles, though exchange in exotic pots and a widespread homogeneity in metal-working techniques are in evidence.

Although the stratigraphy at Ban Chiang is fugitive, it is apparent that there is a basal unit characterised by grey, probably ashy, material, followed by a redder soil. I have already suggested that the Late Period at Ban Chiang may reflect a major cultural dislocation. I wonder if there is another dislocation, perhaps involving a period of abandonment, between the grey and red contexts. If there is, and analysis of the evidence for ritual in conjunction with the ceramic and human remains might illuminate this possibility, then an important question emerges. Were there three relatively brief phases in mortuary activity, with intervals of abandonment in between? Or does the relatively shallow buildup (*c.* 2.75 m in the 1974 excavation and *c.* 3.5 m in the 1975 area) incorporate long-term continuity? Have we underestimated the speed with which prehistoric deposits can accumulate in Southeast Asia? The present radiocarbon chronology does not assist in choosing between these alternatives. A series of accelerator dates on chaff present in mortuary ceramics might.

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