

An Archaeological
Assessment at
Don Dong Muang
Northeast Thailand

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The site of Don Dong Muang lies some 5 kms north of the city of Ubon at the southern edge of the Khorat plateau, northeast Thailand (Fig. 1). This area has produced the largest amount of archaeological material in Thailand with sites dating from the fourth or early third millenium BC to AD 1000. The plateau is bounded to the north and east by the Mekong River, with mountain ranges to the west and south. There are two drainage basins; the Songkhram to the north and the Mun-Chi basin to the south. It is in this southern area that the town of Ubon is located, near the confluence of the Mun and Chi Rivers.

Assessment

In 1990 the site of Don Dong Muang (Fig. 2) was purchased by a Mr. Puchon for housing/development with a large area (c. 6.5 hectares) having been machine stripped to a depth of c. 1 metre. Initial foundation work, road building and pipe-trenching exposed *in situ* inhumations (contained within funerary urns) with associated bronze and iron artefacts. This attracted some small scale looting.

Material collected following this ground disturbance (and now in the possession of the present site owner, Mr. Lek) included bronze armlets, bracelets, rings, a barbed spearhead, a variety of iron artefacts, ceramics, glass and lithics. It is clear that many of these artefacts were derived from disturbed grave groups.

In December 1991 Mr. Lek invited me to undertake an initial archaeological assessment of the site. The primary objective of this assessment was to ascertain the maximum extent of archaeologically significant deposits that might be threatened by further development. The assessment was designed to maximise information whilst minimising disturbance to the surviving deposits. This was achieved by non-intrusive field survey and the investigation of existing builders' trenches. The density distribution of artefacts (predominantly

potsherds) recorded by preliminary field survey suggests that archaeological deposits may extend over a very considerable area, perhaps as great as 6.75 hectares (16.68 acres). The results of this limited assessment (outlined below) clearly demonstrate that beneath the present truncated land surface, undisturbed stratigraphy is preserved to depths in excess of 2 metres.

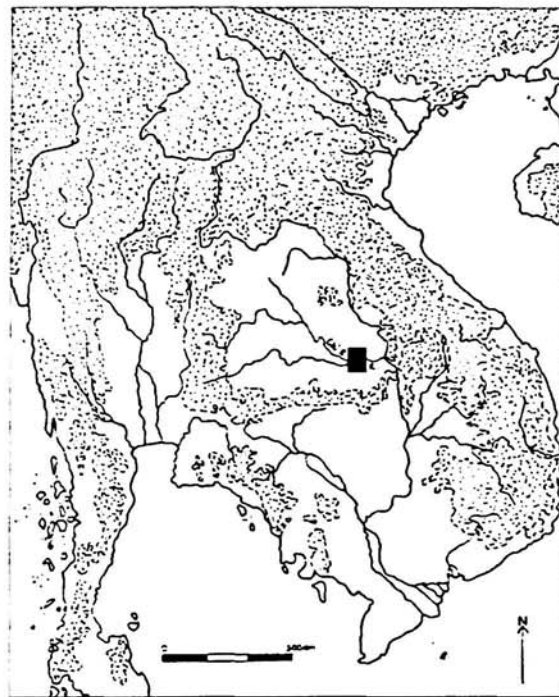


Figure 1 Location of Don Dong Muang

Sub-surface investigation was confined to a large builder's trench [Trench 1, (Fig. 3)] measuring 7 x 4 m in plan which was re-opened to a depth of 2.10 m to reveal a complex suite of sands with interdigitated cultural horizons. The uppermost of these horizons were dominated by substantial spreads of iron slag.

These horizons also furnished numerous small finds including pottery cylinders and iron artefacts. The lower levels of this sequence had been cut by four large pits, three of which contained the remains of substantial funerary urns between 0.4–0.52 m in diameter. The fourth pit contained large, unabraded potsherds and charcoal. In the eastern section of this trench (Fig. 4) the basal stratigraphy sealed an oxidised clay surface which was cut by post/stake holes of c. 0.15 m diameter. This surface is interpreted as a floor level and conjoining potsherds and other cultural debris were intimately associated with it.

The western section of the trench (Fig. 5) furnished four discrete ceramic groups each comprised of large upstanding urns capped by smaller inverted vessels. In close stratigraphic association with these urns were two sealed pits, the fills of which contained secondary deposits of potsherds and other debris.

With one exception the fills of the urns recorded in Trench 1 had been looted out. The one intact fill contained a corroded iron object and charcoal. Mr. Puchon informed me that the majority of the artefacts which he has been able to recover were discovered in exposed funerary urns within a 60 m radius of Trench 1. One of these urns, although truncated by machine, still contained undisturbed fill and I was able to examine this in controlled

conditions. The urn contained the remains of an inhumation (calvarium, ribs, limb bone fragments, vertebrae and phalanges from a single individual) together with c. 70 cylindrical blue glass beads. These were typically 3 mm in length and probably made from glass rods.

Artefacts

Many of the artefacts were discovered during construction work and do not have provenances. However, few had been cleaned and still had matrix attached. From this evidence, their general state of preservation and information supplied by the original site owner, it is clear that they are derived from the immediate environs of Trench 1.

Analysis of this material was necessarily limited. However, the following observations were made.

i) There is considerable range in ceramic forms and fabrics even within discrete, closely associated groups. Principal forms include:

Large (typically 0.4 m diameter x 0.6 m rim height) convex based funerary urns with simple straight or occasionally bevelled rims. A decorative element unique to these urns is incised applique ornamentation. With the exception of these applied motifs, decoration is limited to simple cord and comb impression.

The funerary urns were capped with inverted, wide-mouthed vessels with rounded or projecting

rims. Decoration, when present, is limited to crude comb impression.

Small (0.15 m–0.25 m rim height) shouldered vessels with bead rims and flat, pedestal or convex bases. These vessels are decorated with linear incisions and comb and cord impressions (in some cases complex).

Small (0.14–0.19 m rim height) vessels with pronounced flaring rims and flat or convex bases. Decoration is similar to shouldered vessels but also includes herringbone impressions.

Small (0.06 m rim height) globular vessels with incurved or projecting rims and convex bases. Simple cord/comb impressed decoration.

Shallow (0.04 m rim height) flat-based dishes.

In addition several sherds of red-on-buff ware were recovered as surface finds. It is noteworthy that no example of this ceramic type was found in situ or associated with grave groups.

ii) Other ceramic artefacts were also examined and included 4 mushroom-shaped 'anvils', 18 clay cylinders and a rectangular clay block exhibiting incised decoration. In an archaeological context the mushroom-shaped anvils are best paralleled at Ban Na Di where they were dated to c. 1000 BC–500 AD (Higham and Kijngam, 1984, 152–156). However, it should be noted

that these artefacts are still in regular use for pottery manufacture in northeast Thailand. Their presence at Don Dong Muang may thus indicate pottery production in the vicinity of the site.

iii) Both bronze and iron artefacts are well-represented, this metalwork being largely derived from funerary urns. Some 52 bronze artefacts and 16 iron artefacts were noted in the site owner's possession. The bronzework was dominated by ornaments, in particular armllets, bracelets) and rings. In contrast the ironwork consisted of 'functional' artefacts notably adze/axeheads and two sickle blades. Martial elements included two bronze spearheads and an iron arrowhead and a sword blade. A single lithic mould valve has been provisionally identified.

The quality of preservation is generally high with only superficial corrosion, no doubt due, in part, to the micro-environmental protection afforded by urn-inhumation. Rice (*Pila* spp.) husks were noted in the corrosion by-products associated with a bronze bracelet from an inhumation indicating potential for the recovery of other organic evidence such as textiles.

iv) A single bronze figurine was also noted. This was reported to have been recovered from an urn-inhumation in Trench 1 along with several bronze bracelets. The figurine is 45 mm in height and is an anthropomorphic representation with male genitalia. Discoid motifs on the buttocks, upper back and head are stylistically identical to the

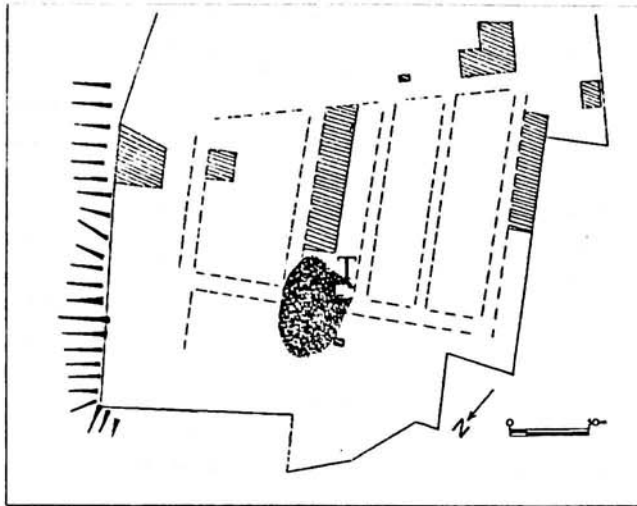


Figure 2 Plan of site

- land boundary
- - - pipe trench
- estimated area of funerary urns
- ▨ buildings
- T trench

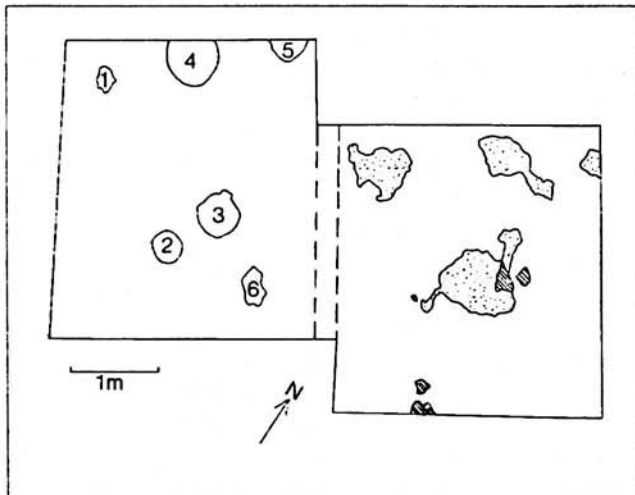


Figure 3 Plan of Trench 1

- oxidised clay surface
- ▨ potsherds
- - - baulk

terminal designs of the penannular bracelets. There are marks on the back of the figurine which may represent the points of attachment for a fastening.

v) Carved stone is represented by a 'pillow,' with linear decoration, which appears to have been re-used as a quern, a second stone fragment is similarly decorated.

vi) Lithics were present in small quantities and are presumed to be derived from earlier horizons. Occasional flake tools, utilised pebbles and hammerstones were present throughout the stratigraphic sequences exposed in Trench 1.

The metalwork recovered from the site is generally attributable to the mid-late 1st millennium BC (Professor C. Higham Pers. comm.). However, the metalwork is only certainly referable to the uppermost (most recent) horizons in the area of the cemetery. Furthermore, the dating and development of urn inhumation in northeast Thailand remains equivocal (Vallibhotama 1984). Therefore, a primary aim of the assessment was to obtain samples for absolute dating. Unfortunately the effects of groundwater penetration and low density of organic material suitable for radiocarbon assay precluded all attempts to develop an absolute chronostratigraphic sequence for the site. It was therefore decided to obtain two initial radiocarbon dates for the urn inhumations from Trench 1. I was able to obtain permission from the Thai authorities to bring back a bone sample from the single urn inhumation which still contained

undisturbed human skeletal material. A second bone sample consisting of a radius and ulna directly associated with a bronze armlet and contained within another funerary urn was similarly obtained. It was intended that this sample would provide an absolute date for the use of these stylistically diagnostic bronze armlets and a second control for urn inhumation at this site.

The two samples were submitted to the British Museum Research Laboratory. In both instances there was insufficient collagen for dating purposes due to severe leaching by groundwater. The radio-ulna was then submitted to the Oxford Accelerator Unit for assay. This test again failed due to lack of collagen.

Discussion

There is limited evidence to suggest that the development of urn-inhumation cemeteries may be correlated with the emergence of moated sites in northeast Thailand during the 1st millennium BC (Vallibhotama 1984).

In the vicinity of Ubon there are no natural mounds of any significant size. However, Don Dong Muang occupies an elevated spur some 5 m higher than the surrounding plain. At Don Dong Muang ground levelling may have destroyed upstanding earthworks, but field survey in the vicinity of the site has not resulted in the identification of ditches which would have survived such truncation.

An archaeological survey by

Vallibhotama (1984) along the Mun River and its tributaries revealed 70 moated sites. It should be emphasized that his preliminary conclusions were based on ground survey and the analysis of the physical structure of the settlements together with surface finds.

At several of these moated sites, archaeological layers exposed by road cuttings revealed bi-partite cultural sequences based on ceramic evidence (Vallibhotama *Ibid*). The later phase was characterised by painted and cord-marked pottery notably large funerary urns deposited in groups. Beads and bronzework were associated with some of the inhumations. Unfortunately, it would appear from published accounts that no absolute dates for the urn-inhumation phases at these sites are available.

On the basis of series radiocarbon dates from Ban Non Yang in Amphoe Chumphon Buri, Surin, Vallibhotama (*Ibid*) suggests that urn-inhumation may date from c. 1000 BC. However, it is unclear from his account whether the Amphoe Chumphon Buri radiocarbon dates are from in situ urn-inhumations or cultural horizons containing stylistically similar pottery.

Thus, the well stratified sequence of urn-inhumation groups at the Don Dong Muang cemetery present an excellent opportunity for establishing a date series for this funerary practice in Thailand. Furthermore, given the good preservation of skeletal remains and associated grave goods, the potential of the site for demographic, artefactual and socio-economic

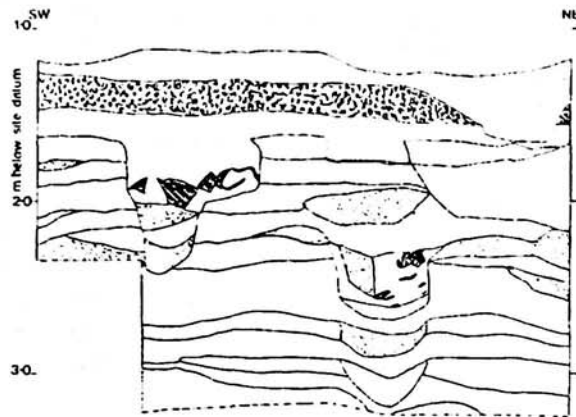





Figure 4 Don Dong Muang, section Trench 1 east

-  road material
-  sterile sand
-  pottery

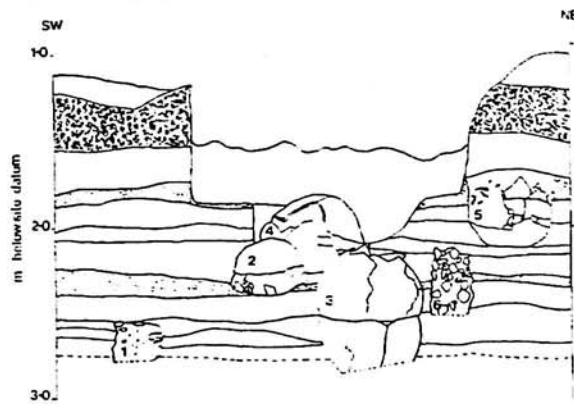





Figure 5 Don Dong Muang section Trench 1 west

-  road material
-  sterile sand
-  pottery

analyses is outstanding. The evidence of contemporary occupation in the vicinity of the cemetery suggests that it may also be possible to contrast the representation of metalwork and ceramics in both domestic and funerary contexts.

In respect of the above, we may also note that there are parallels for the association of iron slag dumps/smelting sites with the Don Dong Muang cemetery. Vallibhotama's (1984) survey of moated sites also identified over 36 iron-smelting sites in the lower Mun-Chi basin, one of which, Ban Yawak was found in the same mound as a burial ground. Excavation revealed iron slag associated with burial urns at a depth of 1.70 m from the surface.

Conclusion

The initial assessment undertaken in January 1992 has demonstrated that an extensive urn-inhumation cemetery of probable late prehistoric/early protohistoric date is currently threatened by development at Don Dong Muang, Ubon. Although construction work and looting have resulted in limited destruction, substantial areas of the site remains undisturbed (up to January 1992). Coherent, undisturbed stratigraphy survives in these areas to depths in excess of 2 metres and contains evidence of domestic, funerary and industrial activity. The range, nature and quality of artefacts recovered from the site is unparalleled in the region, in particular, the metalwork represents one of the most important corpora so far discovered in Thailand.

References

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