

## Chapter 9

### The level 5/6 interface at Ban Na Di

A major stratigraphic break is evident in Ban Na Di at the level 5/6 interface. In pottery, this change is characterised by the replacement of the founding orthodox grog-tempering tradition with another highly distinctive technology. A different and more sophisticated range of pottery types is evident. Whereas during MP1 wares are rarely slipped or painted, the new assemblage is dominated by this surface treatment. The new ceramic tradition is accompanied by many changes in other aspects of material culture as well as mortuary ritual, but faunal and floral remains suggest a continuity in subsistence strategies throughout the prehistoric occupation (Higham and Kijngam 1984:698-701).

Deposition of lower level 6 material saw the last use of the excavated area for burials belonging to MP1. Evidence for *in-situ* bronze casting as well as the first recovery of iron slag were found in level 5 (Higham and Kijngam 1984:29).

If we are to account for these developments, it is important to establish whether a hiatus occurred between the end of level 6 and the beginning of level 5. We may address this question through a comparison of levels 8-6 with levels 5-3 pottery and industrial ceramics. Ceramic artefact groups which span the period in question are of special interest. The principal source of pottery during MP1 is from secure mortuary contexts, but the levels 5-3 wares derive mainly from occupation areas. Correlation with evidence from other Sakon Nakhon Basin sites, however, could be expected to corroborate that from Ban Na Di.

A central objective of the present study has been to consider a wide temporal and areal framework. If the model set out in chapter eight has achieved its objective, it will have shown that generalised processes underlie the changes at Ban Na Di. During MP1, very few exotic fabrics originated outside the Sakon Nakhon Basin. This emphasis changed markedly during the period levels 5-3 were laid down, when imports from the Khorat Basin become increasingly dominant. The MP1 local pottery manufacture is characterised by an orthodox grog tradition, but during the subsequent period, a bleb grog tradition is established. These developments mirror, at least partially, changes of a much broader nature which permeated the Sakon Nakhon Basin.

Temporal distributions of exotic fabrics provide insight into changing cultural relationships. When local changes occur in concert with regional changes, their role as information carriers is increased. If technological innovation accompanies such events, an enhancement of inter- and intraregional diversity is favoured. According to Renfrew (1972, 1975) growth in endogenous and exogenous exchange favours societal cohesiveness and the rise of central places. To explore these processes, we need to discriminate between local change and external influences at Ban Na Di.

Although the available data do not allow a detailed understanding of these latter events, a



broad outline of external relationships is apparent in the technological developments already noted. These probably influenced much of the immediate region and are interwoven with the Ban Na Di sequence. Thus bleb-tempered wares dominate the earliest levels at Ban Muang Phruk. This dominance is secured later at Non Kao Noi following a first occurrence of Chi Valley fabrics. These sequences match the change at Ban Na Di, the magnitude of which is confirmed by surface collections. These suggest that bleb-tempered wares became widespread throughout the Kumpawaphi and Upper Songkhram region. In addition, a marked growth in interregional exchange is evident.

Ban Na Di burial vessels from mortuary phases 1 and 2 are both petrographically and stratigraphically distinct, but no burials were found associated with level 5. To help resolve this lacuna we will turn to other evidence. We should first note, however, that four of five mortuary phase 2 infant burial urns were made of local bleb wares but the fifth contains fabric group 16 material. This gives a secure stratigraphical association of old and new ceramic traditions.

Fabric group 16 material also occurs in one level 7 and two level 5 anvils. This continuity reinforces the close association between Ban Na Di and Nong Sung suggested by the funerary urns. In level 5, for the first time, both local pottery fabrics and imported anvils are rendered in Nong Sung clay. Yet the imported anvils represent the old tempering method, while the local pottery follows the new bleb tradition. Overlying the local changes pottery and anvils of the old tradition continued to enter Ban Na Di, a clear signal that the manufacture of bleb-tempered pottery did not replace the long-established Sakon Nakhon Basin ceramic traditions completely.

Temporal distributions of Sakon Nakhon Basin wares after level 6 also support assimilation rather than replacement. During level 6, no such bleb-tempered wares are evident. They make their first appearance in level 5, when they almost equal wares tempered with orthodox grog. Significantly, level 5 also demarcates the first dominance of local bleb-tempered wares at Ban Na Di. Equally important is a rapid decline of Sakon Nakhon Basin blebs during level 4, coupled with the reinstatement of orthodox grog dominance. This suggests other Sakon Nakhon Basin manufactories continued production unaffected by the new developments.

We need now to reflect on the above evidence in terms of the relative similarity between the tempering methods of the two ceramic traditions. Their responses to the requirements of processing clays derived from sedimentary contexts fell under the same technological rubric: both employed a grog temper. Thus both ceramic traditions are likely to have carried out production in similar environments in terms of the temper chosen. Given the higher energy input involved, potters are unlikely to opt for grog temper unless suitable alternatives are unavailable. These circumstances favour an origin in sedimentary regions which lack readily exploitable tempering materials. This is not meant to imply simple environmental determinism, but argues for a logical adoption of circumscribed technical methods in the absence of any viable alternative. If potters wish to carry out pottery manufacture, the only possible alternatives are importation or the adaptation of materials through their modification. This latter response is, of course, reliant on technological knowledge and expertise.

If cultures which share generally similar environments also share similar cultural adaptations, their exploitation of these habitats may also be similar. If so, this compatibility is likely to have enhanced diffusion and the subsequent assimilation of new, improved, techniques. According to Houghton and Wiriyaromp (1984:401), the human remains display only slight evidence of biological change between mortuary phases 1 and 3. The ceramic evidence does



not contradict these data. Conversely, the almost complete failure to develop further the potential western links can be explained by the same theoretical constructs. Thus the adaptation to the western piedmont is unlikely to match closely that to the sedimentary basins of the Khorat Plateau.

Rim fabrics changed markedly at the level 5/6 boundary. Nine local bleb-tempered rim-forms occur in level 6, few enough to be explained by human and animal activities such as posthole excavation or bioturbation. A review of fabric distributions should help redress any imbalance between doubtful stratigraphic integrity opposed to statistical rigour. We will consider exotic rims and industrially related fabrics.

In spite of probable mixing between levels, the frequency distribution histograms set out in figure 9.1 show trends in the incidence of exotic rims. These are reinforced by “whole” vessel distributions. It is recalled that exotic fabrics will be disproportionately represented due to the bias discussed in chapter seven.

Exotic fabrics increased steadily from level 8 until level 4, when they declined sharply. Exotic wares from Sakon Nakhon Basin sources almost mirror this increase, but clearly suffer heavily from the level 4 decline. Fabrics from outside the basin, however, jump dramatically at level 5. They continue to increase throughout level 4 and 3. In spite of the sharp overall reduction of imported wares from level 4 onwards, the considerable increase in Khorat Basin imports continues unaffected. Khorat Basin wares more than double in level 5, just as Sakon Nakhon Basin wares begin their decline. These dramatic events gain increased significance set against both a long period of import conservation and the increased distance Khorat Basin wares were transported.

“Whole” vessel fabrics corroborate the levels 8-6 increase in Sakon Nakhon Basin imports. Exotic vessels follow the same temporal frequency distribution pattern displayed by the levels 8-6 occupation wares. This validates the initial tendency of increased proportions of exotic wares but with emphasis on Sakon Nakhon Basin rather than Khorat Basin pottery. Thus it seems reasonable to view the overall shape of the exotic rim frequency distributions as meaningful. Further corroboration is available from industrial fabrics.

Ceramic anvils relate directly to both production and the practitioner. They are thus potentially sensitive indicators of fine grained as well as broader cultural changes. At Ban Na Di, a clear dichotomy is evident between the distribution of early and mortuary phase 2 local fabrics. Each is mutually exclusive to the stratigraphic zones either side of the level 4/5 interface. A variety of exotic fabrics are also represented. With one level 4 exception, (cat. number 387), they are all consistent with Sakon Nakhon Basin clays. This latter anvil is composed of a fabric which is consistent with a Chi Valley derivation.

Early period crucible fabrics do not contain local clay, yet it was used to construct a level 7 furnace. This changes in level 5 when two crucibles manufactured from untempered local clay appear. This first evidence for use of local clay in crucibles coincides with the disappearance of the major early crucible fabric. Crucibles are components of an important industry, thus it would be difficult to dismiss these changes as the result of whim. If so, they occurred in the face of a tradition spanning over a millenium, and unnecessarily risked crucible failure. The use of local clay for a level 7 furnace increases the likelihood that experimentation with its use in crucible fabrics took place. If so, it is possible these were unsuccessful because casting procedures during MP1 ruled out its use. The possibility that contact with Eastern Sakon Nakhon Basin metallurgists continued, beyond the level 5/6 interface, is suggested by the presence of crucibles both in level 7 and within level 5 (cats.1371 and 1730 respectively).

Clearly, major changes in the combined pottery data are independently corroborated by



key industrial evidence. Even when viewed in isolation, many individual changes are highly informative. Coherence is present between each of the key ceramic aspects examined. These correlations are unlikely to have been coincidental. Interpretation of this information naturally involves important cultural questions.

Three processes seem to be central to the changes documented within the Sakon Nakhon Basin. First, they appear to form part of broad scale developments which probably originated beyond the southern boundaries of the Khorat Plateau and culminated in Northeast Thailand. Second, we can reasonably anticipate that an intensification of exchange relationships between the Chi Valley and the Sakon Nakhon Basin provided a catalyst for an increase in technological and cultural interaction. Such exchanges could have favoured the diffusion of people manufacturing in the bleb-temper tradition into the Sakon Nakhon Basin. Thirdly, subsequent to the widespread introduction of the new technology, methods previously extant over much of the region continue to be favoured by some Sakon Nakhon Basin pottery manufactories but not others.

At the point when level 5 at Ban Na Di started to accumulate, production of ceramics employing techniques peculiar to the early tradition seems to have continued without pause in some Sakon Nakhon Basin centres. Others changed to the new tradition. Previously unoccupied sites were also settled by people at least utilizing extensively, if not manufacturing, the new ware. During this period at Ban Na Di, the material culture intensified dramatically in range and complexity, and iron slag first occurred (Higham and Kijngam 1984). Accomplishments associated with metal casting at Ban Na Di changed after more than a millenium of continuity.

The introduction of these new technologies into the Sakon Nakhon Basin seems to have had an uneven effect on the existing manufacturing and related exchange infrastructure. It apparently complemented rather than superceded the existing ceramic exchange frameworks. The transformation of ceramic methods at Ban Na Di was complete, and the ceramic spectrum from Non Kao Noi suggests that this change was repeated at other production sites. At Ban Na Di close links with the Eastern Sakon Nakhon Basin continued. This region is adjacent to tin deposits in Laos, a key raw material in bronze production. Thus the existing Sakon Nakhon Basin exchange networks are maintained and intensified. This intensification is repeated in the Khorat Basin exchange network, which previously recorded a steady, but less intensive, development. Intensified exchange networks require increased organisation and hint at population increase. Population growth and subsistence expansion are recurrent but not sufficient, conditions for the development of stratified societies (Dumond 1972). It seems reasonable to assume, however, that the assimilation of new and improved technologies would consequently stimulate accelerated change.

The mechanisms underlying these changes are clearly likely to be complex and it may be unwarranted to speculate too far, without a more detailed understanding of the parameters involved. In summary the following processes are suggested for the Khorat Plateau:

- (i) the broadscale changes in ceramic technology were superimposed onto existing traditions.
- (ii) exchange-induced diffusion of new technologies from south to north.
- (iii) assimilation of these innovations occurred, usually along with population movements, into new regions.

Since the evidence could be interpreted in several ways, we need not argue for direct expansion of centralised polities nor as yet reject such models. Until both a clear chronological framework and further production and technological evidence is available, it may be prudent



to view the many and varied competing models as conjectural and refutable. This comment is designed to accommodate what could well have been a mosaic of local responses to the conjectured processes. It would help explain, for example, why the inhabitants of the large fortified site of Ban Chiang Hian do not seem to have taken up the new bleb-temper technology.

In the Sakon Nakhon Basin, a variety of site occupation strategies were adopted during the period of infiltration. Some sites, such as Ban Muang Pruk, were occupied for the first time. Non Kao Noi and Ban Na Di had been previously inhabited. Perhaps the clinching factor which points to a mid-sequence hiatus at Ban Na Di is the sharp discontinuity in existing ceramic manufacture, coupled with a clear continuity in external relationships which involve metallurgy within level 5. Thus a close association with key external relationships was maintained without any noticeable disruption. This apparently smooth transition, however, occurred in concert with major changes in the technological framework of two important industries.

Throughout the sequence, ceramic production proceeded under stress due to the inadequacy of local raw materials. Such circumstances magnify any risks attached to the exploration of alternative clay sources. What factors mitigated during MP1 in favour of one clay for pottery and another, probably similarly distant, for crucibles is unclear. Certainly, social relationships alone need not take precedence. The MP1 clay source at Nong Kham Din is yet to be exhausted. We can be reasonably confident, therefore, that the level 5/6 discontinuities, when taken in conjunction with the ceramic data, provide strong *prima facie* evidence of a hiatus between level 6 and the inception of level 5. Metallurgy also involved exotic ceramic materials. Their presence underlines strong Eastern Sakon Nakhon Basin associations. A continuity of contacts with this region suggests raw material dictates were given precedence. Thus it is reasonable to assume a reliable source of clay would not have been needlessly passed over. Immigrants taking up residence in a populated settlement can reasonably be expected to acquire local knowledge of such an important clay source quickly.

In the following chapter we will proceed with a review of two problems directly related to the shortcomings inherent in pottery analyses which emphasize style. In each case the stylistically distinct ware concerned has important implications for both regional and inter-regional chronologies.

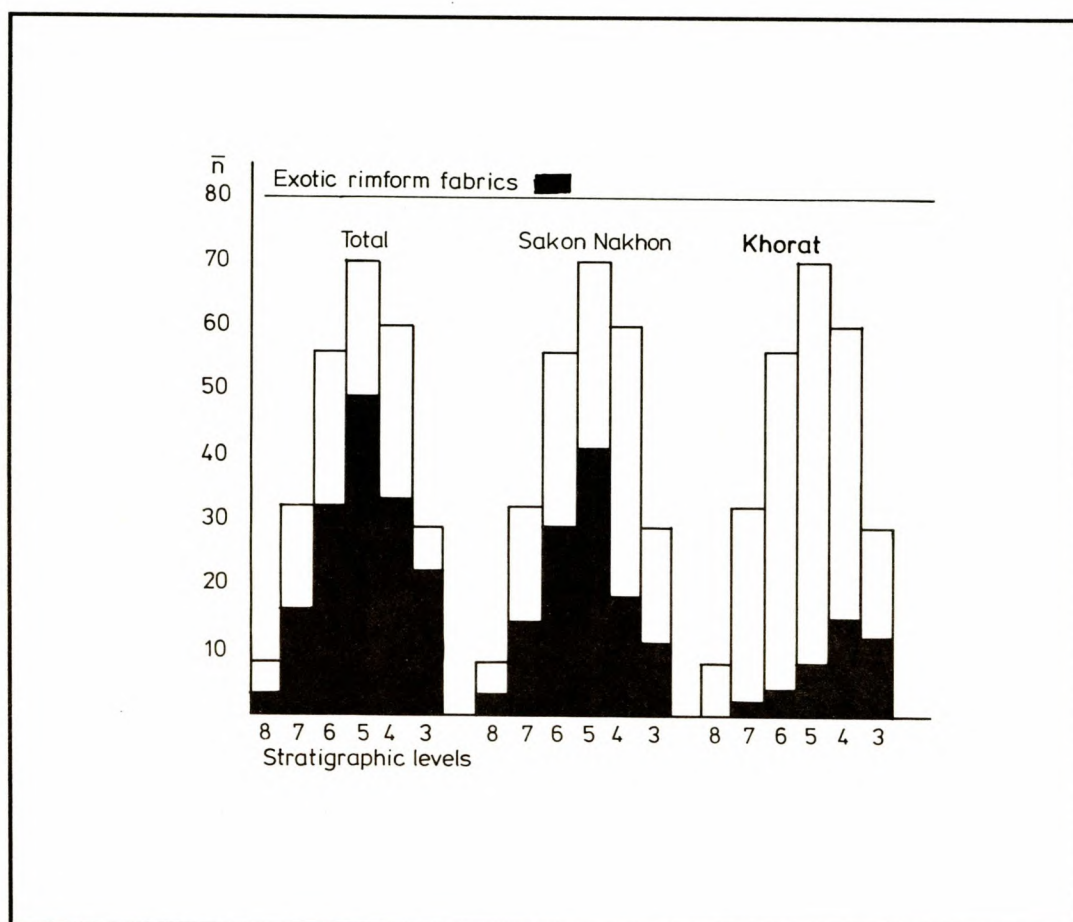


FIGURE 9.1: THE DISTRIBUTION OF FABRICS AT BAN NA DI.



## Chapter 10

# The “Om Kaeo” and “Ban Chiang painted” ware problems

Two distinctive kinds of surface decoration were encountered at Ban Na Di among exotic wares. One involved incised and/or slipped and painted surfaces, the other featured painted designs only. The first variety has often been categorised as “Om Kaeo” ware after the site wares of this surface finish were first recognised. Similarly, it has been common practice to equate the painted wares with Ban Chiang where this surface finish was prominent. Because both kinds of wares have often been used as chronological “markers”, and they have been postulated as having had a relatively wide distribution, their wider context needs to be considered.

### 10.1 The “Om Kaeo” problem

Many of the problems which beset stylistically orientated characterisations of Southeast Asian ceramics can be summarized through the analysis of pottery often labelled “Om Kaeo”. Since the discovery in 1972 at Ban Om Kaeo (Preecha and Pukajorn 1976), of globular cord-marked vessels with decorated fields, almost any similarly decorated sherd has been categorised “Om Kaeo”. The decoration consists of intricately incised and slipped or painted fields often ingeniously arranged. Ban Om Kaeo lies about 1 km from Ban Chiang.

When a “wealth of this pottery” was recovered at the latter important site, the excavators, Gorman and Charoenwongsa, “almost” designated a single phase “Om Kaeo”. They note that “various renderings of this technique exhibit one common feature - the design motifs so carefully incised on the buff background are later filled with highly contrasting red pigment” (Gorman and Charoenwongsa 1976). Characterised by curvilinear and geometric designs, the ware was “probably the most distinctive” and considered “highly diagnostic” (Gorman and Charoenwongsa 1976:20-21). In the light of this report, perhaps predictably, such decorated wares were often used for intersite chronological correlations (Bayard 1987, White in: Bronson and White 1984, Higham and Kijngam 1984). Subsequent reconstruction of Ban Chiang vessels has revealed considerable variety, and recently these wares have been used to help designate three phases in a revised Ban Chiang chronology (White 1986:240- 245, 279).

White has pointed out that the term is now so “broadly and imprecisely applied” to render it meaningless for stylistic crossdating. She notes that the lumping of these vessels together on the basis of “incised and painted designs” (i.e their mode of surface decoration), “caused considerable confusion” (1986:245). Yet in spite of this, specific distinctive (sic) forms may