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EXCAVATIONS AT LITTLE MUCK SHELTER LIMPOPO VALLEY

A progress report for the National Monuments Council
Permit number 8/97/07/007/51

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Introduction

Trial excavations were conducted at Little Muck Shelter (LMS) in August 1997. This work was carried out as part of preliminary investigations into the Later Stone Age of the region. A specific research focus is on the last 2000 years, when hunter-gatherer populations shared this landscape with incoming agropastoralists.

The Shelter is located on the farm Little Muck within the sandstone belt along the southern bank of the Limpopo River. The shelter is north facing and is about 2 km from the Limpopo River. A relatively large tributary of the Limpopo, the Kolope flows several hundred metres to the west.

The site was chosen for excavation for several reasons. First, was that up to that time, it appeared to have one of the better deposits in the Shashi/Limpopo belt. Furthermore, the deposit is not restricted to the shelter but extends out into an open air midden that occupies a partially bounded rocky courtyard in front of the shelter. It is felt that these courtyards could have been used as kraals, and hence may yield evidence of small scale stock keeping by hunter-gatherers or more committed pastoralists. The second reason for excavations was that the shelter is just over 1km north of Leokwe Hill where extensive excavations by John Calabrese at 10th to 13th century Zhizo and K2 agropastoralist settlements have been undertaken. This obviously offered the opportunity to assess interaction between hunter-gatherers and agropastoralists from communities that were possibly in direct contact with one another.

Stratigraphy, dating and regional demography

Excavation focussed on a trial trench in the front courtyard midden and a test pit behind the shelter drip line. The courtyard trench exposed a 0.30 m deposit. Stratigraphic resolution was extremely poor and a bland grey ashy sand was removed using 0.05 m spit levels. The density of cultural material in the courtyard midden sampled was surprisingly low and bone is preserved only in patches of small fragments. In contrast, the shelter test pit exposed a stratigraphically more resolved deposit that was removed through a combination of natural layers and spit levels within layers. The maximum depth is 0.40 m and the density of cultural material is much higher with some extremely rich layers.

In the shelter excavation charcoal has been insufficient for dating purposes, but a general chronological framework has been derived from associated diagnostic ceramics. The stratigraphic distribution of pottery indicates that both the courtyard midden and the shelter deposit date mostly within the last 2000 years. Pockets of clean sand within an undulating and rotten sandstone bedrock in the courtyard are ceramic free. Scrapers and backed tools from these basal pockets predate food production in the region but there is no precision on the age. Similarly, the basal shelter deposit (GS2/ARB2) is ceramic free (Table 1), and also indicates a pre-2000 BP date. However, the preceramic basal deposits from both the courtyard and the shelter are ephemeral when compared to the ceramic sequence. It appears that there was little LSA occupation at LMS prior to the advent of food production in the region.

It is not clear whether this is simply the case at LMS, or whether this reflects regional hunter-gatherer demography. Nick Walker (1995) states that LSA deposits are difficult to find as one moves southwards into the Mopaniveld out of the Matopos. The inference is that the Limpopo Basin habitat was not favoured by hunter-gatherers and this may have been exacerbated by low mid-Holocene productivity as a result of climatic shifts. Recent work at an LSA open camp situated above the Saltpan at the northwestern end of the Soutpansberg shows that there is significant pre-ceramic LSA occupation. This may indicate that the Soutpansberg was similar to the Matopos in offering reasonably productive habitats for hunter-gatherers prior to 2000 BP, at times when the adjacent Limpopo Basin could only offer a limited resource base.

The predominantly ceramic sequence at LMS may indicate that the Limpopo Belt was only intensively utilised by hunter-gatherers over the last 2000 years. This possibility needs to be tested at other sites in the area. If correct, environmental change is one possible causal factor (see Huffman 1996). The rationale behind hunter-gatherer use of the Limpopo Belt at this time, however, is complicated by its correlation with the appearance of food production. The stratigraphic layers GS/ARB at LMS contain Bambata and Happy Rest ceramics. While the affinities of Bambata are poorly understood, Happy Rest pottery was made by the first full agropastoralist communities between AD 350 and 650 in the region. Present survey evidence, however, indicates that they settled agriculturally and environmentally better areas south of the Soutpansberg and on the northern fringe of this mountain chain. The visibility of Happy Rest sites along the Limpopo Belt is low and it is only at about AD 700, that Zhizo agriculturists begin to significantly occupy and mark the landscape with their sites. Happy Rest sites may be buried and await discovery, but the possibility of regional differences in the density of Happy Rest sites is still a possibility. If the density of Happy Rest sites is higher around the mountains 80 km to the south of LMS, then it is possible that the Happy Rest pottery at LMS was acquired some distance from the site and not from Happy Rest settlements close by. Furthermore, the intensification of LSA use of LMS at this time may also suggest that hunter-gatherers could strategically interact with Happy Rest farmers, but also had the option of withdrawing to the Limpopo Belt, a landscape that may have still been marginal for full agriculture.

Overlying the GS/ARB (Happy Rest/Bambata) layer is PGA3. This layer is associated with Zhizo pottery. The Zhizo phase of the Early Iron Age marks the start of intensive agricultural occupation of the Limpopo Belt and the start of sociopolitical change, premised in part, on intensifying trade links with the East African coast. For hunter-gatherers, it marks the end of a relatively 'free' habitat because Zhizo farmers effectively saturate the Limpopo Belt with settlements. A suite of new dates from nearby Leokwe Hill for Zhizo occupations and on contemporary Zhizo and K2 occupations place PGA3 in the range between AD 1000 and 1220. PGA3 more probably dates between AD 1000 and 1100 because PGA2 above is associated with K2 ceramics.

PGA3 is a remarkable layer because of the density of material it contains. It contrasts significantly with the Happy Rest/Bambata GS/ARB layer below and with the PGA2 layer above. While the GS/ARB layer may mark low intensity hunter-gatherer interaction with Happy Rest farmers at a distance, the PGA3 layer suggests a hunter-gatherer occupation of high intensity. The fact that Zhizo farmers are now immediate and dominant neighbours suggests that the intensity of the PGA3 hunter-gatherer occupation has everything to do with an altogether different scale of forager/farmer interaction. This is elaborated with a summary discussion of the cultural material given below.

PGA2 above is associated with K2 ceramics while the other 3 layers above PGA3 are associated with K2 and Mapungubwe period pottery (collectively Leopards Kopje). This would place these deposits in the range between AD 1100 and 1270. The surface sweepings at LMS contain Venda pottery that is linked to 19th century Venda settlements on the eastern side of Leokwe Hill and on Machete, the next farm to the east of Little Muck.

All the layers above PGA3 (Leopards Kopje) have dramatically reduced frequencies of cultural material. A preliminary interpretation of this shift is that hunter-gatherers may have been excluded from the shelter and that neighbouring Leopards Kopje farmers had appropriated the shelter for their own use.

Analyses

Most of the cultural material from the trial excavations at Little Muck has been processed but the faunal remains have not yet been examined. As mentioned, interest revolves around the marked density differences between PGA3 and to a certain extent, the layers below PGA3, and the top half of the sequence from PGA2.

Table 1 lists formal stone tool counts from LMS. In the Zhizo period of PGA3 there are 135 scrapers, compared to only 8 in the Leopards Kopje layer PGA2. The waste artefact categories parallel this same change. The formal tool distinctiveness of PGA3 in terms of densities is mirrored in the numbers of backed tools. While the layers below PGA3 have

relatively high numbers of scrapers, the pulse of tool manufacture in PGA3 still stands out.

Scraper and backed tool frequencies are shown graphically in Figure 1. Other artefact types covary with lithic densities. For example, in PGA3 and GS/ARB there are 21 and 24 bone artefacts respectively, most of which are points and linkshafts (Figure 1). In contrast, PGA3 has 8 glass beads, while in the Leopards Kopje layers above, there is a total of 51. All diagnostic metal artefacts including iron points, beads and razors and copper chain , beads and wire come from PGA2 and above. Only adiagnostic scraps of iron have been recovered from PGA3. The sharp discontinuity between PGA3 and PGA2 is also evident in the fact that no ochre has yet to be recovered from PGA2 and above (Table 2). It is felt that the stratigraphic restriction of ochre to PGA3 and below may date the rock paintings on the shelter wall to before AD 1000.

The distinctiveness of PGA3 continues when ostrich eggshell and Achatina weights are examined (Table 3). Although the sample size is small ostrich eggshell drops markedly between PGA3 and PGA2. The low amounts of Achatina shell in GS/ARB below PGA3 and in PGA2 above, contrast sharply with the amount in PGA3. It is significant that in PGA3, there are only 5 ostrich eggshell beads, and 5 roughouts. It is also significant that so far only 1 Achatina bead has been identified, and this comes from PGA3.

Diagnostic and adiagnostic bone weights also show that PGA3 contains most of the bone, while tortoise remains are almost entirely restricted to PGA3 and below. In all categories of material, either because of an abundance or because of an absence, the distinctiveness of the lower half of the sequence, and PGA3 in particular, is marked in comparison to the upper half of the sequence.

Preliminary discussion

Several preliminary ideas are suggested by the LMS sequence as recovered so far from the shelter excavation.

1. The Happy Rest/Bambata layers of GS/ARB mark an intensification of hunter-gatherer occupation of the shelter, that may generally indicate a regional intensification of occupation by hunter-gatherers in the Limpopo Belt. Prior to this, hunter-gatherer use of LMS appears to be ephemeral. The presence of Happy Rest pottery at LMS indicates interaction between hunter-gatherers and early agropastoralists. The nature of this is vague, because the actual points of contact may have been 60 to 80 km from LMS itself. This is because the density of first phase Happy Rest settlements appears to be centred on the agriculturally better habitats around the Soutpansberg and Blouberg, and even further to the south. Excavations at the Saltpan in this region have concentrated on interactions in this area. A shelter and an open camp in close proximity to one another have been investigated (see Bhagwandas Jogibhai 1997, Van Doornum 1998). The Limpopo Belt, therefore, may have offered a retreat for hunter-gatherers because farmer occupation was regionally restricted, low in density, and patchy.

2. At about AD 750, the Zhizo phase of the Early Iron Age starts to occupy the Limpopo Belt. Hunter-gatherers, consequently, are increasingly constrained on a landscape that is dominated by farmers. The high intensity of occupation and the high density of material in the Zhizo period layer PGA3 at LMS, may in part reflect a quite different response by hunter-gatherers to immediately adjacent farmer settlements. While, the distinctiveness of PGA3 may reflect an intensive phase of hunter-gatherer occupation during which they were doing things for themselves, the character of PGA3 suggests that may have been servicing Zhizo economies in several ways.

   The high numbers of scrapers suggests scraper production over and above the immediate needs of hunter-gatherers. Future work needs to test the possibility that hunter-gatherers intensified hide work. Processed skins could have featured in local trade and barter transactions. Furthermore, the high densities of bone work in PGA3 may indicate that hunter-gatherers intensified hunting activity as a part of intensified hide production. Another possibility is that neighbouring farmers contracted hunter-gatherers to undertake hide preparation, but the hides were supplied by Zhizo farmers

themselves.

The relatively large amounts of shell in PGA3 can be interpreted in several ways. Most simple is that these remains indicate a more intensive subsistence focus on these species. At face value, the fact that ostrich eggshell and Achatina beads only show a marginal increase in PGA3 would seem to indicate that the food interpretation is correct. In contrast to a possible intensification of hide production in PGA3, there is nothing in the form of higher bead densities or bead manufacturing debris that indicates LMS was a point for surplus bead production for exchange. However, when one examines ostrich eggshell and Achatina bead densities at neighbouring farmer sites such as Schroda and Leokwe Hill, it is possible that hunter-gatherers were supplying farmers with the raw material. For example, at Schroda Hanisch recovered 810 ostrich eggshell beads and 4733 Achatina beads (Hanisch 1980). Furthermore, a large cache of ostrich eggshell roughouts was recovered from Schroda that may number in the thousands. This cache comprises drilled roughouts that were all strung and ready for final rounding. Large pieces of ostrich eggshell occur within this bead cache. The implication is that ostrich eggshell bead manufacture was undertaken within the settlement at Schroda. There is no evidence to suggest who was responsible for this. There is no complementary evidence from Schroda that suggests whether Achatina beads were also made within the settlement.

These figures also suggest that Achatina beads were favoured over ostrich eggshell beads. However, when the LMS shell data is combined with the Schroda evidence, and data from Leokwe Hill, some subtle complexities into the nature of bead manufacture and the possible control of this process are suggested. Firstly, the popularity of Achatina beads may indicate that the shell was locally more abundant, while ostrich eggshell was the rarer commodity. If it is correct that Zhizo occupation of the Limpopo Belt correlates with increased rainfall (Huffman 1996) then it is possible that favourable ostrich habitats were increasingly displaced into more arid terrain further to the west. If rarity confers 'value' then it is not surprising that the large ostrich eggshell bead cache was found at Schroda, because this settlement was the centre of political

and economic power during this period in the Limpopo region. Ostrich eggshell bead production may have been centred on and controlled by Zhizo 'elites' as commodity production intensified to service local demands, and as local economies become increasingly geared towards production for intensifying trade links with the East African coast.

The rarity and hence power value of ostrich eggshell beads over Achatina is enhanced when the distribution of these items at Leokwe Hill is examined (John Calabrese personal communication, Calabrese in press). Leokwe Hill comprises two contrasting areas. A prominent hill has Leopards Kopje occupation while the northern hill base has an extensive town that was occupied by people manufacturing Zhizo style ceramics. Radiocarbon dates indicate that hilltop and valley floor occupations were contemporary, and yet stylistically discrete. The interpretation of this configuration is that hill-top Leopards Kopje occupation marks elite status, while Zhizo valley floor occupation marks commoner status. If correct it is significant that the hilltop excavations have produced 159 glass beads, while the valley floor excavations have produced 4. Significantly, 218 ostrich eggshell beads come from the hilltop, while only 57 have been found below. Of most interest is that 1 Achatina bead has been found on the hill, while 204 have been found below. In summary, the ostrich eggshell beads at Schroda may indicate control of this resource by emerging elites, while the distribution of beads at Leokwe Hill appears to further intensify this trend.

Through a comparison of the distribution of beads between LMS, Schroda and Leokwe Hill, it is possible that the PGA3 density of shell at LMS relates to hunter-gatherer supply of raw material. While the presence of beads and bead manufacturing debris at Schroda does not rule out the possibility that hunter-gatherers were making them in farmer settlements, there is little from LMS that indicates hunter-gatherers were manufacturing surplus beads at this site. Hunter-gatherers were perhaps allowed to service some aspects of Zhizo and Leopards Kopje economies (hide preparation, shell raw material acquisition), but the final production may have been carefully monitored and controlled. If the distribution of Achatina (commoner) versus ostrich

eggshell (elite) at Leokwe Hill is correct, then it may also indicate that hunter-gatherers were interacting with farmers more at the lower end of the political and social hierarchy. Whatever the specifics of this interaction, it is suggested that hunter-gatherers during the Zhizo and initial K2 periods were increasingly marginalised and excluded from participating in local economies. As the centralisation of farmer political power intensified and the social distance between commoner and elite increased, material tokens of that power were restricted in terms of access and distribution. This may have applied equally, if not more so to the increased exclusion of hunter-gatherers.

3. The distribution of ochre in and below PGA3 but not above, may provide an indication as to the date of the paintings in Little Muck Shelter. In short, the art may have been integral to transacting hunter-gatherer social change in the face of low intensity disruption during the Happy Rest phase, and more intensive interaction during the Zhizo and initial Leopards Kopje phase. It is suggested that from PGA2 and above no more rock art was placed on the LMS walls. It is possible, therefore, that the distinctive Limpopo Valley hunter-gatherer art may date and be restricted to a relatively short time period in the first millennium AD. Work on the excavated and rock art sequence at the Salt Pan sites supports this view (Hall & Smith in press).

4. The suggestion made above is strengthened when the abrupt downturn in hunter-gatherer material culture in PGA2 and above is considered. I suggest that when all data is assessed, it is reasonable to infer that hunter-gatherers were excluded from LMS during Leopards Kopje times. After PGA3, there was little and probably no hunter-gatherer use of LMS. Hunter-gatherer use of LMS, may have only continued up to about AD 1000. This does not mean that shelter use ceased. On the contrary, continued deposition over 0.20m does indicates shelter use, but that it was Leopards Kopje farmers who were responsible for this. The exact reasons for this are not possible to state at this stage. It is possible that farmers recycled hunter-gatherer places to empower their own ritual and social dynamics. Ideas about the ambiguity of hunter-gatherer (first peoples) status and ritual control over landscapes may have something

to do with farmer appropriation of prime hunter-gatherer places. Whatever the case, this general interpretation is consistent with the ideas presented above concerning the marginalisation of hunter-gatherers within a more intensively controlled network of commodity production and exchange.

Although it is difficult to date Mankala gaming boards, fourteen of these boards were engraved into the sandstone bedrock in front of the shelter. It is open to question, but I associate the Mankala boards with farmers and suggest that they correlate with the Leopards Kopje period in the excavated sequence from the PGA2 layer and above. Furthermore, the ethnography of Mankala indicates that wherever varieties of it are played in Africa, it is a game played exclusively by men. If the correlation between the Mankala boards and the PGA2 and above Leopards Kopje occupation is correct, then it is possible that the appropriation of Little Muck Shelter had more to do with world of men.

Conclusion

Although the excavations at LMS have been small, there is sufficient material to put forward some ideas about the sequence of interaction between hunter-gatherers and farmers in the Limpopo Belt. The preliminary excavations at LMS have been critical for model building in a region that has had no systematic LSA research on the depositional sequence.

One problem with the LMS work is the lack of a tighter chronology and consequently, there is a dependence on associated diagnostic ceramics for dating. While this associated chronology is broadly intact, future excavations need to find good material for direct and specific dating.

The LMS investigation has also sharpened the issue of site selection. LMS was selected because of its close proximity to the Zhizo and Leopards Kopje town situated on and around Leokwe Hill, just one kilometre away. The comparison between LMS hunter-gatherer occupation and their neighbouring farmers facilitated by their close proximity, has suggested valuable research directions. It is suggested, however, that the distance between the two is too

small, as indicated by the appropriation of LMS by Leopards Kopje people. Half of the LMS sequence, therefore, relates to farmer use of the shelter. While this may provide a critical insight into the perceptions farmers had of hunter-gatherers and while this is of extreme interest, it still leaves the immediate sequence of hunter-gatherer responses in the region incomplete. A working hypothesis, therefore, is that hunter-gatherers were seriously marginalised and displaced within the core areas of Leopards Kopje political power. As a result we need to identify hunter-gatherer sites that may be situated on the margins of that power and which are not immediately adjacent to farmer sites that did not occupy senior positions in the regional political pecking order. Rock shelters on the farm Balerno appear to offer the opportunity to investigate hunter-gatherers in a less crowded context, and consequently, extend the sequence of regional interaction between them and farmers.

Lastly, the LMS excavations have reinforced the view that interactions between hunter-gatherers and farmers cannot be generalised for long sequences and over wide regions. The farmer sequence, in terms of demography, distribution and density of sites and the scale of political, social and economic power is a highly heterogeneous one. The LMS work has hinted that the nature of the interface between hunter-gatherers and farmers is different during each phase of the sequence. Furthermore, the use of LMS by farmers reinforces a central principle of this research, namely the necessity to carefully scrutinise the farming sequence in order to derive a more complete picture of interaction. The discussion given above concerning bead manufacture may be one case that illustrates this point. Equally, therefore, the agropastoralist sequence needs continual reassessment, and a research orientation that expands a somewhat narrow focus away from sites of major political power. More recent work at Leokwe Hill and other sites, for example, indicates that we do not understand the Iron Age sequence and the dynamics behind it as well as we thought. An understanding of the complexity of these sequences is needed if we are to move beyond simply restating general modes of interaction, and try and capture some of the smaller scale social dynamics evident in the ethnography.

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Table 1. Little Muck Shelter: L42 preliminary formal stone tool counts

Layer	Chal. scrap.	Qt. scrap.	Chal. segs.	Qt. segs.	Chal. bb	Qt. bb	S'stone scrap	IA.phase	BKTS
SSW/GA1	2							Venda/Map/K2	3/1
PAH/GA2	2				1			Map/K2	1/3
PGA/GA3	8	1						Map/K2	4/3
PGA2	8	1			1		1	K2?	4
PGA3	135	3	3	1	1	1	2	Zhizo	6
GS/ARB	81	3	4	1	5			HR/Bambata	1/3
GS2/ARB2	22	2		3		1		Pre-contact	2/2
Total	258	10	7	5	8	2	3		

Level	ochre	stone with ochre	Totals
SW	-	-	
GA1	-	-	
GA2	-	-	
PAH	-	-	
GA3	-	-	
PGA	-	-	
PGA2	-	-	
PGA3	123.9	108.1	
GS/ARB	152.6	34.4	
GS2/ARB2	51.9	11.7	

Table 2. Pigment density at Little Muck Shelter.

Level	OES pieces	Achatina pieces	ratio OES:ACH	FWM	Farmer affinity	Totals
SW	0.1	1.3			Venda/Map/K2	1.4
GA1					Mapungubwe/K2	
GA2	7.5	8.5	0.88	1.6	Mapungubwe/K2	18.5
PAH	0.4	0.9	0.44		Mapungubwe/K2	1.7
GA3	1.7	12.0	0.14		Mapungubwe/K2	13.8
PGA	14.0	13.7	1	0.6	Mapungubwe/K2	29.3
PGA2	11.4	23.6	0.48	0.8	K2?	36.3
PGA3	**97.1**	**203.0**	**0.47**	**14**	**Zhizo**	**314.5**
GS/ARB	52.8	21.2	2.5		Happy Rest/Bambata	76.5
GS2/ARB2	1.3	0.4	3.2	0.2	Pre-contact	4.9

Table 3. Shell weights from Little Muck Shelter (L42). (OES-ostrich eggshell, FWM-fresh water mussel)

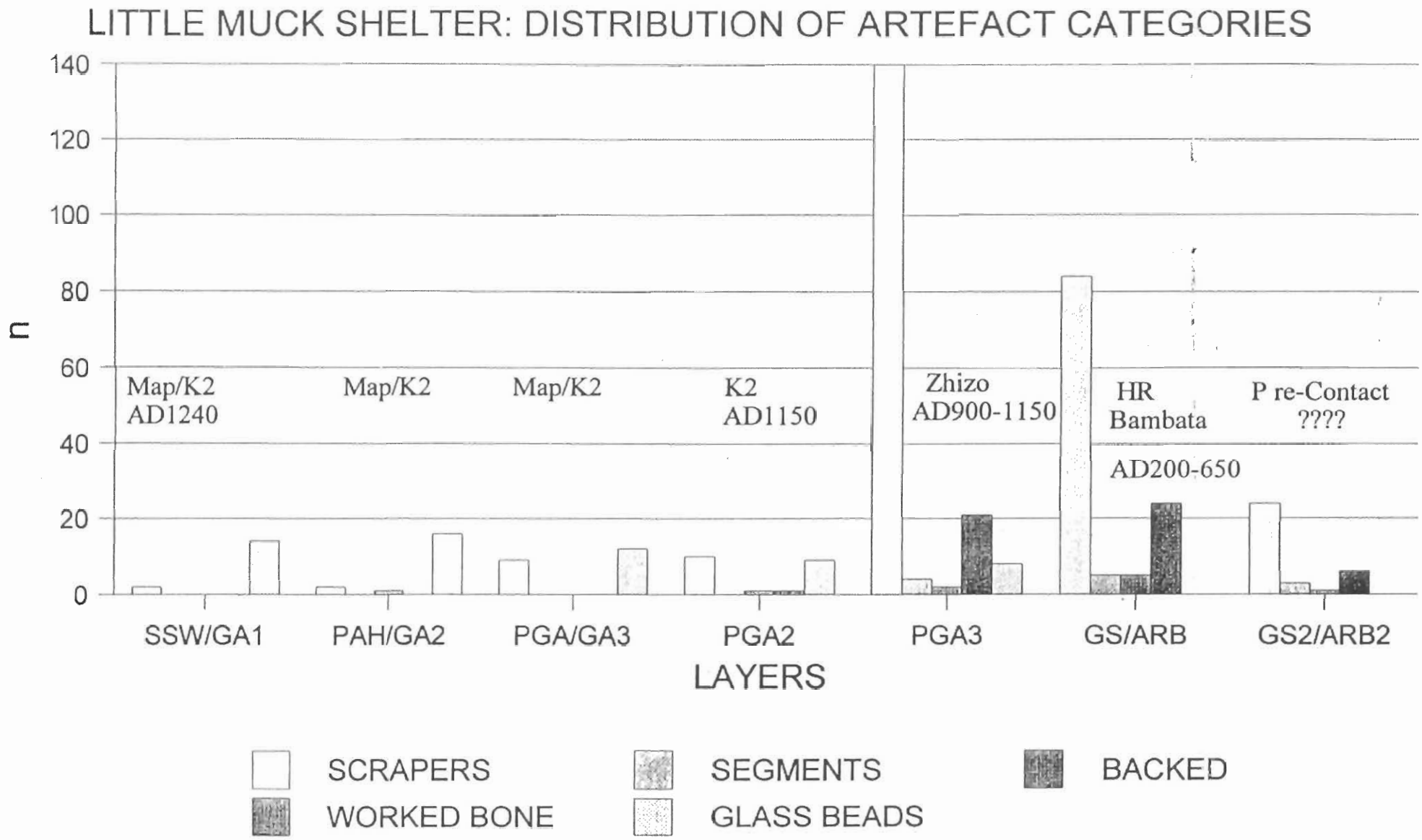

Figure 1. The distribution of artefact categories through the LMS sequence.