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ARCHAEOLOGICAL INVESTIGATIONS AT MEYERSDAL KOPPIE, ALBERTON

A Phase-2 Report Prepared for the Alberton Town Council

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INTRODUCTION

The Department of Urban Planning of the Alberton Town Council commissioned Van Riet & Louw Landscape Architects to coordinate the development of the Meyersdal Nature Reserve as an education, tourism and recreation centre. The Reserve contains the remains of a few Late Iron Age stone-walled settlements that form the core of heritage development plans. Van Riet & Louw therefore contracted Archaeological Resources Management (ARM) to join the development team.

The feasibility study was completed in 1996. It recommended four actions: clearing and mapping one complete settlement (Figure 1), excavations to locate features, reconstruction of the walls and the construction of traditional style houses on their original locations. The archaeological component of the development began on May 6 this year. By agreement with the Council, ARM would use the project for student training. Consequently, student demonstrators and students from the First Year Archaeology Course helped to excavate one stone-walled settlement. This part of the project began in July and ended on the fourth of September.

A short introduction to the Late Iron Age puts stone-walled sites on Meyersdal Koppie into historical perspective.

BACKGROUND

At the beginning of the Late Iron Age, ca. AD 1000, Nguni and Sotho-Tswana speaking people began moving into South Africa. The present evidence suggests that Sotho-Tswana first inhabited the Mpumulanga lowveld and then

Figure 1. Plan of the Meyersdal Koppie Site 2628 AC 51.

spread across Gauteng and the Northern Province into Botswana.

Early Sotho Tswana lived by agropastoralism, that is they kept herds of cattle, sheep and goats and cultivated grains such as sorghum and millet. Because of this economic focus, they lived in broken country that provided water, grazing and good soils, with a warm climate suitable for sorghum and millets. Consequently, the Witwatersrand was not occupied at this time.

At about AD 1500 the climate became warmer and rainfall increased (Tyson and Lindsay 1992), making new areas, such as Gauteng and the Free State, suitable for subsistence agriculture (Huffman 1996). Most of this new area was relatively treeless, and so Sotho-Tswana people began building their homesteads and villages with stone. In plan these first stone-walled settlements contained a central cattle kraal surrounded by a residential zone marked on the outside by another circle of walling. This organization is called the 'Central Cattle Pattern' by archaeologists. Some examples of this early type have been recorded in the Klipriviersberg (Mason 1986) but not on Meyersdal koppie. This period of occupation ended in about AD 1650 when the climate deteriorated.

At about AD 1750 the climate improved once again, and the Witwatersrand was occupied for a second time by Sotho-Tswana speaking people. In plan the second-phase settlements are different in that arcs in the outer wall designate individual households (Huffman 1986, Mason 1986, Taylor 1984).

This second period of occupation coincides with the introduction of maize by the Portuguese. Because of the higher rainfall, Late Iron Age farmers throughout South Africa were able to cultivate maize. Maize fields yield about three times more food than sorghum and millet, and they are easier to cultivate, so a family could plant about three times more fields. As a result, populations grew and competition for land increased. In the early 1800s the climate deteriorated markedly, causing widespread famine and fighting. At the same

time Korana and Griqua entered the area from the south and began raiding on horseback with firearms. In all it was a period of great military stress. This is why many of the second type of settlement were built with high walls in defensive positions on hilltops. They were abandoned between 1823 and 1827 when Mzilikazi conquered the area.

The stone-walled settlements on Meyersdal Koppie belong to this second period. According to historical research (Rasmussen 1975), Mzilikazi settled along the central vaal, between Heidelberg and Potchefstroom, in 1823 before shifting north of the Magaliesberg in 1827. He was supposed to have removed the BaKhudu (Sotho-Tswana for tortoise) from this area. The BaKhudu were a subdivision of the better known BaKwena (Breutz 1954, Hammond-Tooke, personal communication), and they probably built the Klipriviersberg and Meyersdal settlements. If not BaKhudu, then another BaKwena group was responsible. Whoever built the settlement left the area in about 1823.

EXCAVATIONS

Method

One site on the northern slopes of the koppie was selected for development (our site number 2628 AC 51). ARM staff began clearing and mapping the site in May. The plan (Figure 1) shows two central cattle areas, designated here as CAA and CAB. The arcs of the residential zone encompassed both central areas. We sampled various localities to uncover features, such as house floors, or to clarify the function.

The basic excavation unit was a 3x3 metre square, lowered in 10 centimetre intervals unless natural strata were apparent. The trenches were numbered sequentially as excavations progressed.

Activity Areas

Twenty-two squares were excavated in the stone arcs of the Residential Zone. As a rule, 4-16 cm of brown soil (level 1) lay on top of red and yellow

decomposing bedrock (level 2). In Tr III, however, 5-10 cm of dark soil lay between decomposing bedrock and 5-15 cm of brown soil. A further exception occurred in Tr V where a modern ash lens rested on top of the brown soil.

Patches of the original walking surface were uncovered in Trench I C and VI A. Trench IV yielded the unburnt remains of a hut floor (Figures 2-3). This floor was marked by a relatively clear and compacted surface in an otherwise stony area. Upper and lower grindstones lay on this surface.

Small stone arcs marked the location of kitchens at the front of several households. We cleared the kitchen in Tr II and the kitchens associated with Tr III, VI, VII and VIII (Figures 4-5). In each case the doorways faced the front courtyard. The internal diameter of these structures varied from 1.2-1.6 m x 1.9-2.1 m. Little was found inside and nothing on the floor.

One cattle kraal in each **Central Cattle Area** was excavated to bedrock. In XII, CAB, 0-10 cm of light brown soil lay on top of a thin dark lens 1-7 cm thick that was probably the remnants of dung. This lens tapered towards the centre onto to red brown soil and stones. The stony substratum sloped down to the bottom of the kraal wall 10 cm below the dung lens (Figure 6).

FINDS

A few pottery fragments were recovered from most trenches (Table 1), but only two sherds were decorated (Figure 7), and there were no complete vessels in any hut or kitchen area. The decorated fragments came from X C 1 and III A 3. They belong to the style associated with Sotho-Tswana people, known as Moloko, and date to the latter part of the sequence.

A few grindstones lay on the original surfaces in the residential zone. Upper grindstones came from I C 1, V A 1 and the hut floor in IV A, while broken lower grindstones came from the hut floor in IV B as well as K VIII and IX A 1.

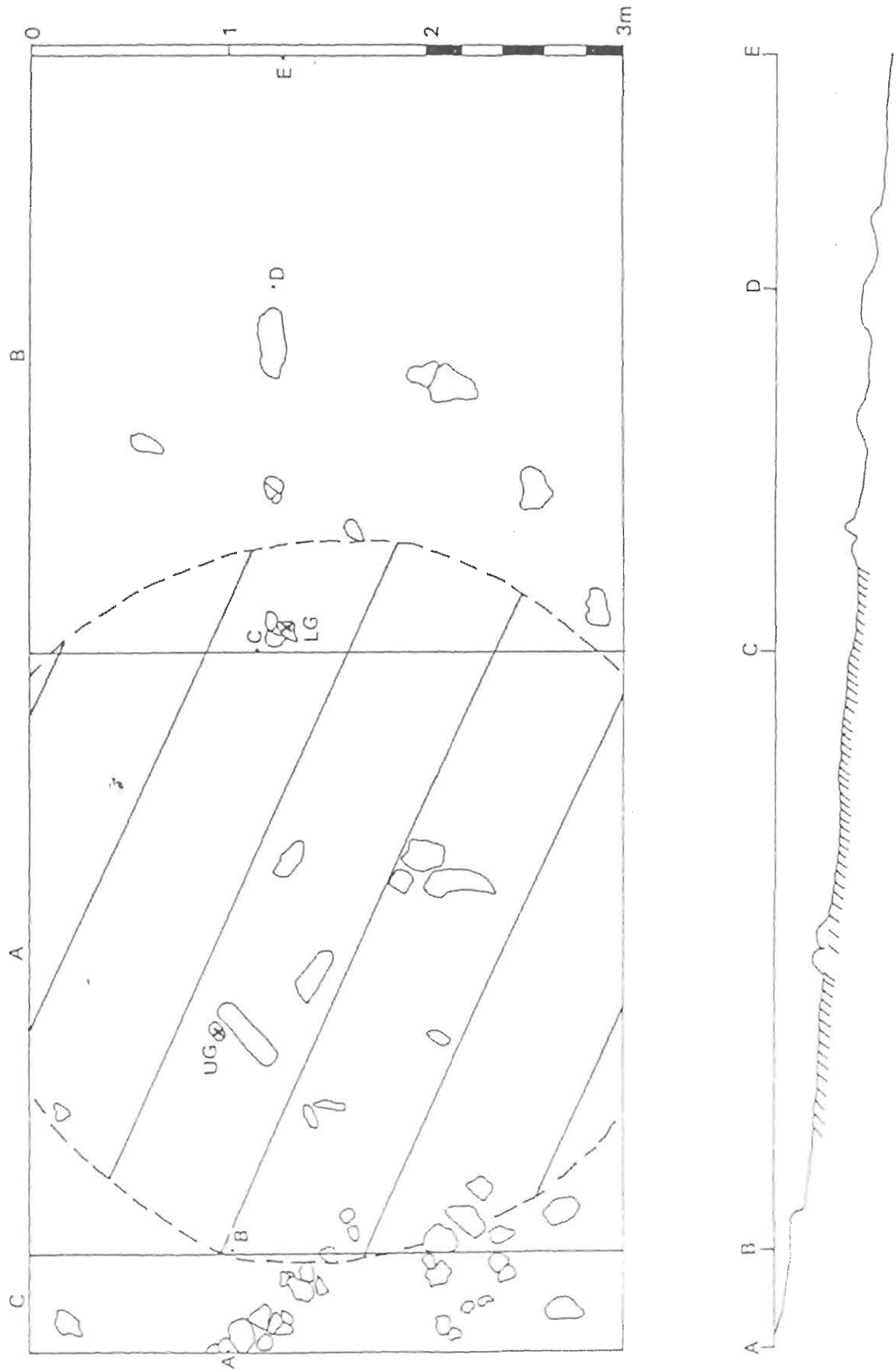

Figure 2. Plan and section of hut in Tr IV A and B 1.

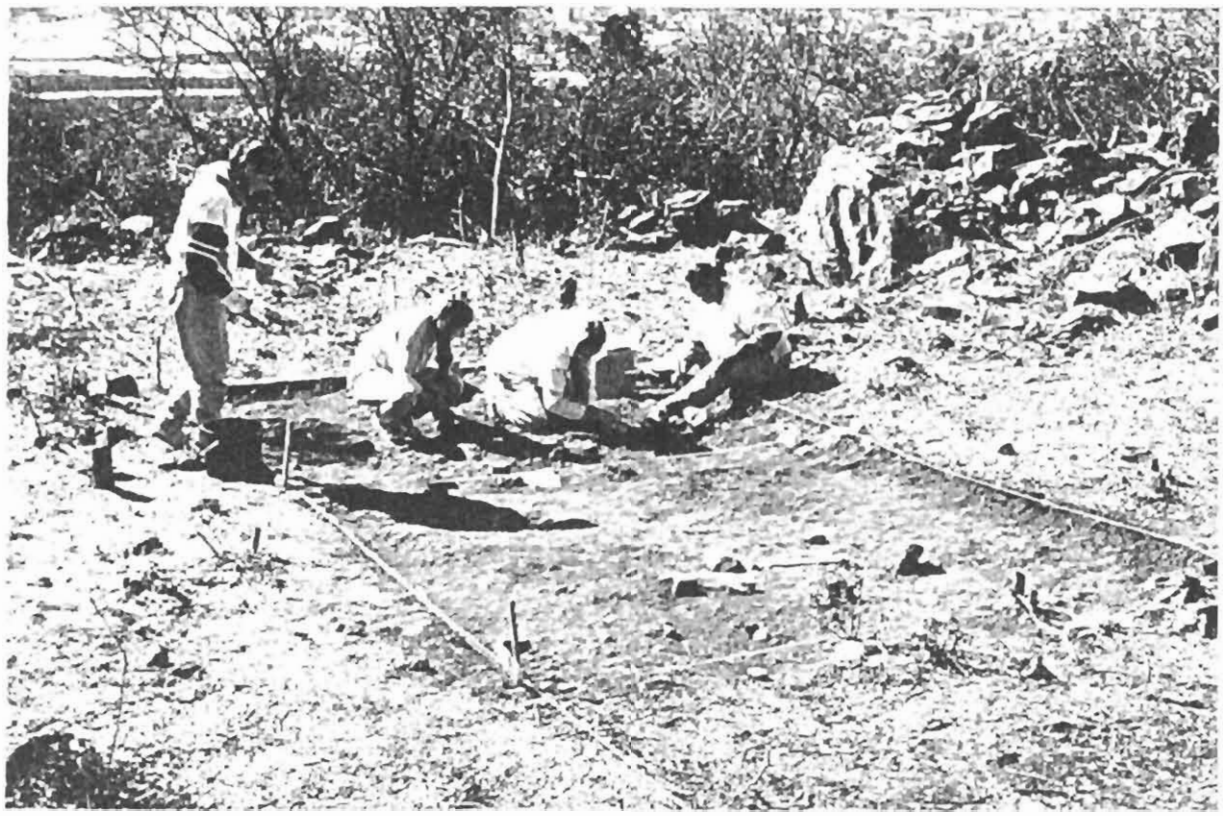

Figure 3. Excavation of Tr IV hut.

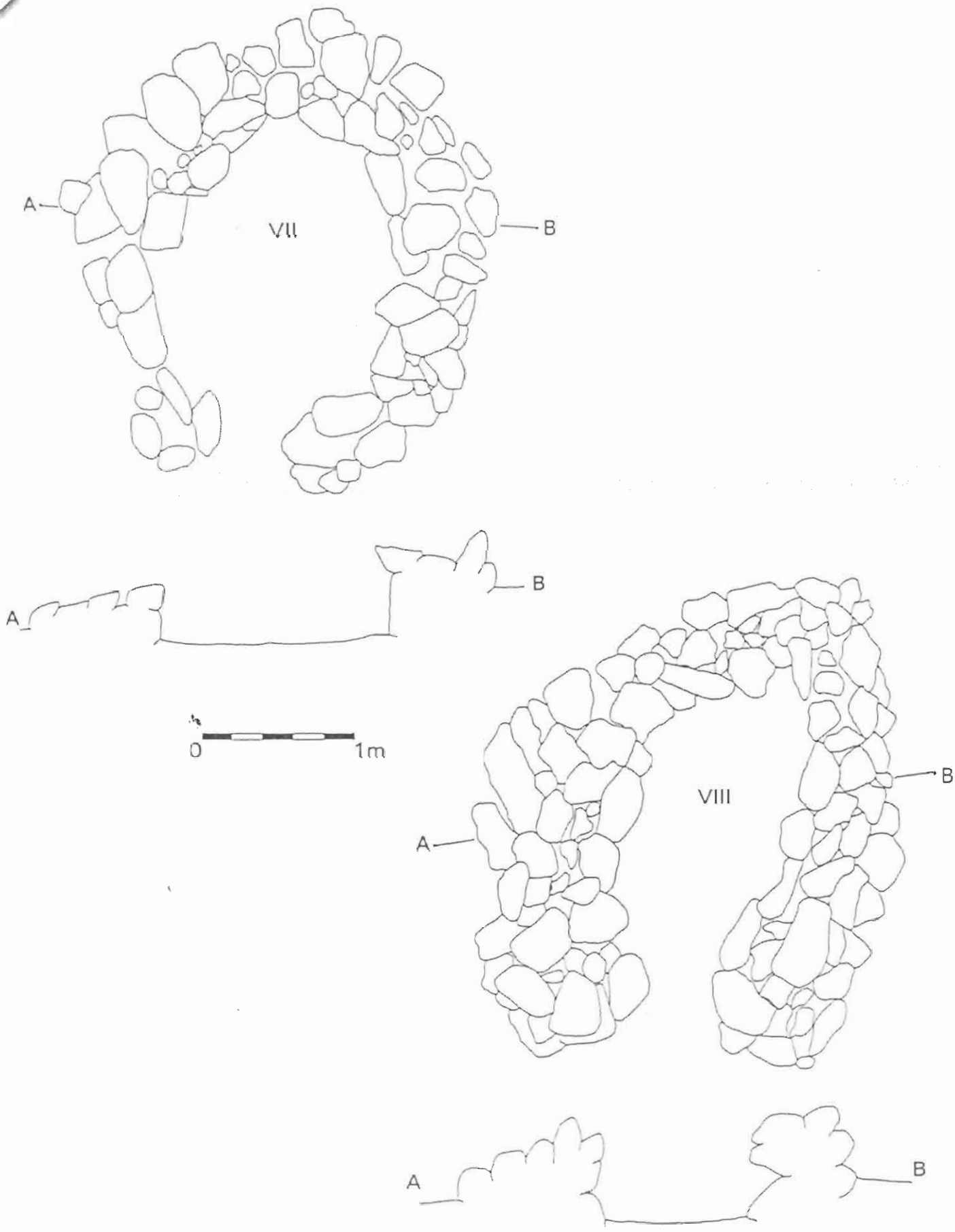

Figure 4. Plan and section of Kitchens VII and VIII.

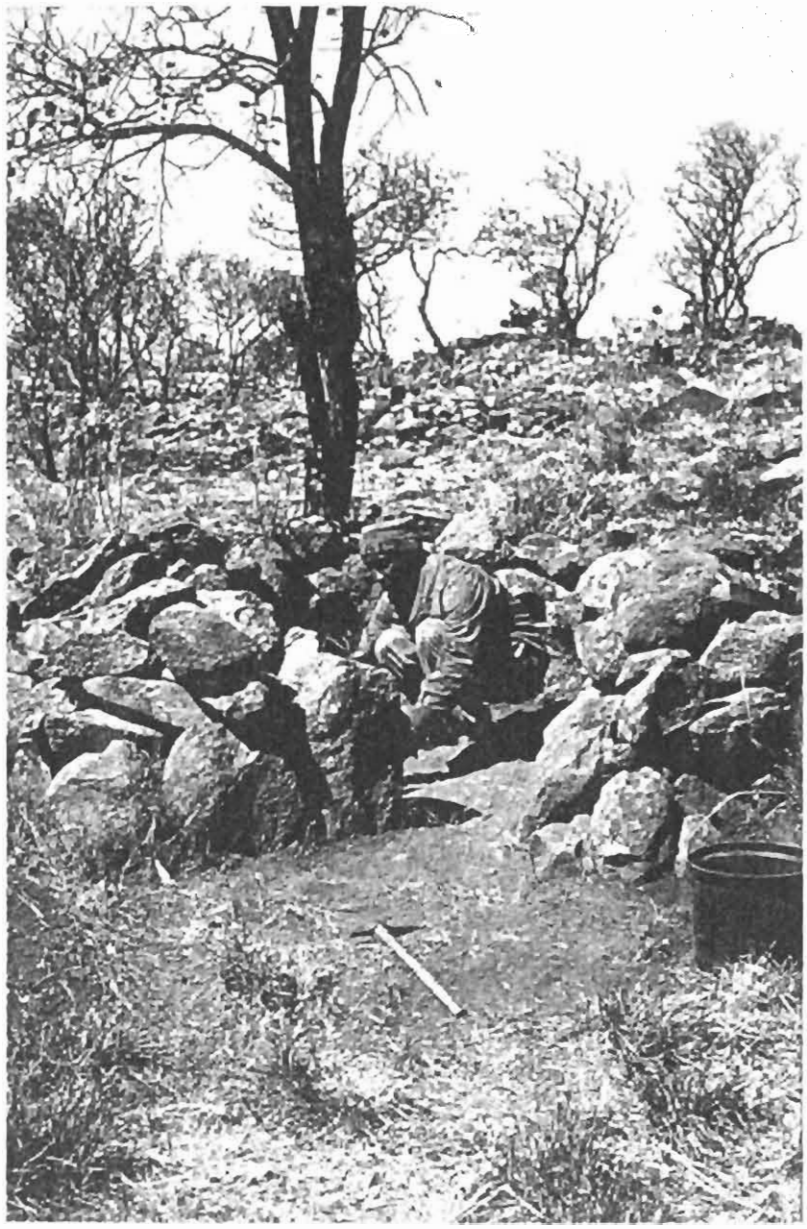

Figure 5. Excavation of Kitchen VIII.

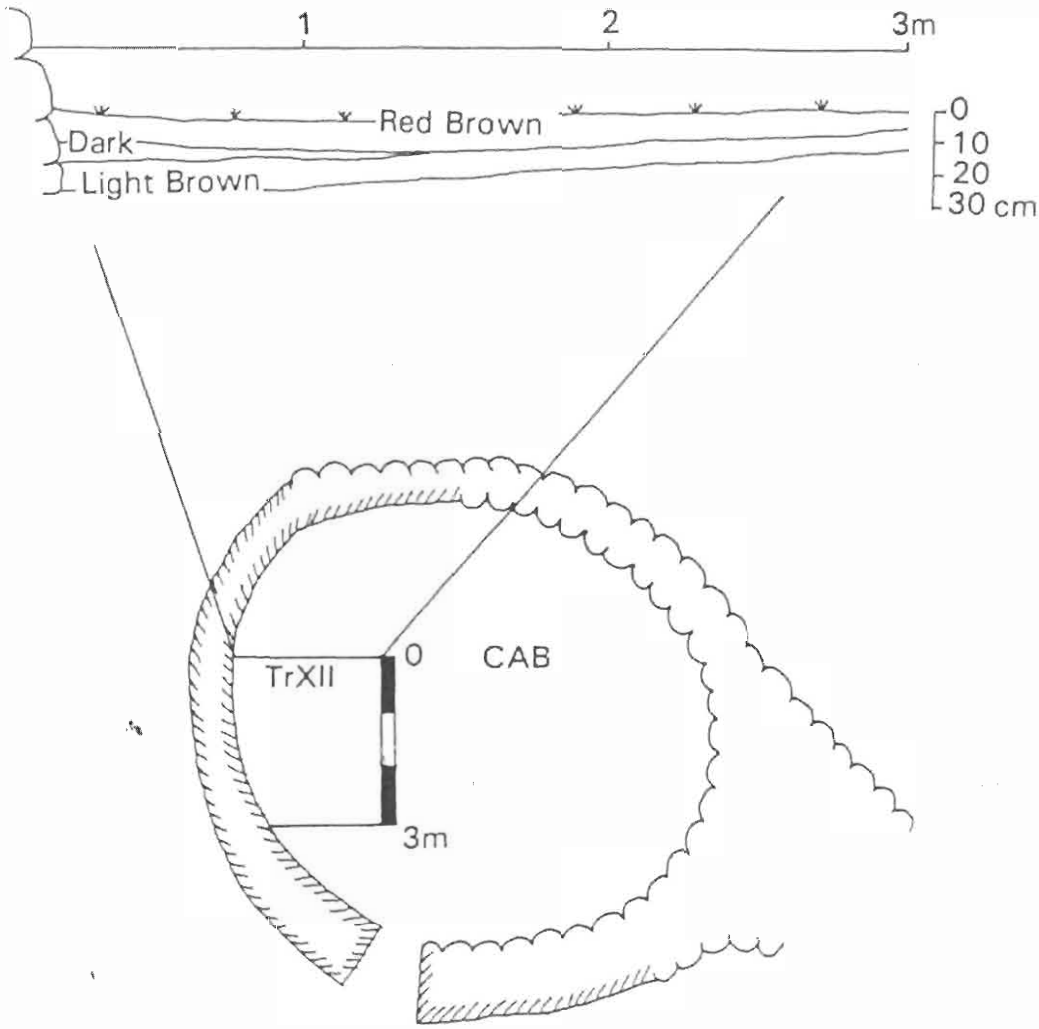

Figure 6. Plan and section of Cattle Kraal XII.

Table 1. Pottery, Stone Artefacts and Bone Recovered from Meyersdal Koppie.

Square	Pottery			Stone	Bone
	Fragments	Rims	Decoration		
I A/C/D 1	18			UG	
II A 1	13				
II A 2	1				
II Kitchen	4				
III A 1	3				
III A 2	37				
III A 3	49	2	1		
IV A/B 1	13			LG, UG	
IV K 2-3	14				
V A/B 1	34	1		UG	4
VII A 1	1				
VII A 2	11				
VIII Kitchen	3	1		LG	
IX A 1	9	1		LG	
X A/C 1	52	1			1 + 7T
X A/C 2	95				
X A/C 3	47		1		
XI Kraal CAA 1					
XI Kraal CAA 2	19				70 + 11T
XII Kraal CAB 1					
XII Kraal CAB 2	7				4
XIII A 1	6				
XIII A 2	48				9 + 1T
XV A 1	51				
XVI A 1	25	1			
XVI A 2	9	1			
XVI A 3	40				

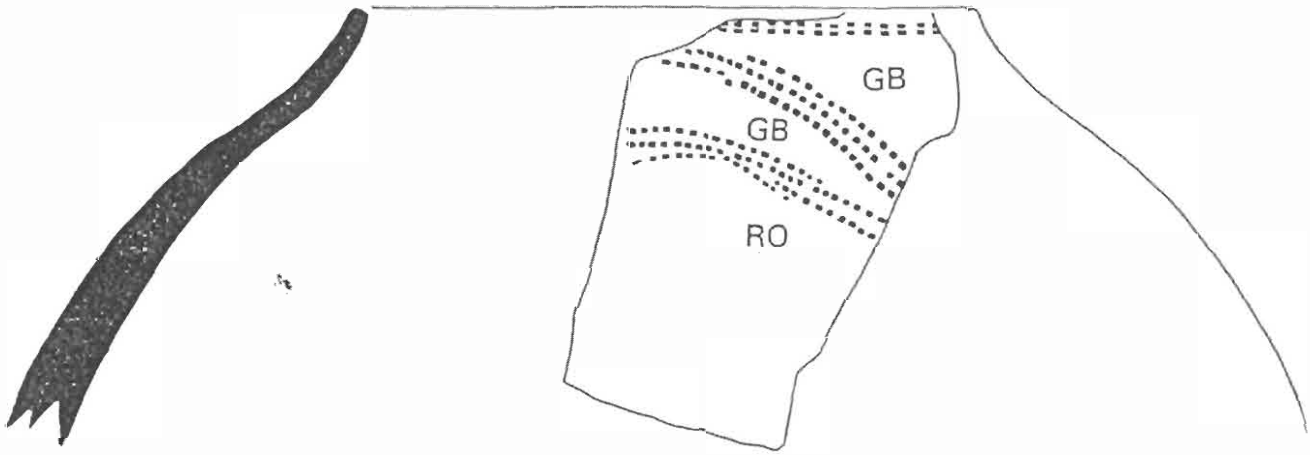

Figure 7. Decorated pot from Tr X C 3: GB = graphite burnish; RO = red ochre.

Bone preservation was poor, but a few cattle teeth were found in the cattle kraal and just below the surface in X A 1 and X C 1. The teeth represent four individuals, two adults and two subadults, but the sample is too poor to reconstruct slaughter patterns. In addition to the cattle, two teeth from a blesbok-sized alcelaphine came from XI 2 in the cattle kraal (Table 2).

Table 2. Teeth Identification.

Taxon	Square		
	III A 2	X A 1/C 1	XI 2
Bos taurus (cow)			
(1) subadult	deciduous M^3 deciduous M_3		
(2) subadult			deciduous PM_4
(3) adult		R M^2, M^1, PM^3, L M_3, M_1	
(4) adult			R M^1, M_3 L M^3, M^2, M^1, M_1, PM_3
cf. *Damaliscus* (blesbok)			
adult		LM_2, PM_4	

INTERPRETATION

The Meyersdal site consists of two homesteads joined together. Because of its larger size, the homestead centred on CAA was the most important. The men's court in this type of settlement was normally located in the central area near the cattle enclosures. The court here was therefore probably on the western slopes of the central enclosure. The smaller court associated with CAB was probably located in a similar position (Figure 8).

In settlements of this type, small animals such as calves would have been separated from adults to prevent injury and to control milk production. The two large enclosures in CAA were therefore for large stock, while the smaller

Figure 8. Plan showing cattle paths and hut locations.

enclosure at the southern end was probably for calves. A similar distinction occurs in CAB.

These kraals lack dung deposits, except against the down slope walls, because the dung had been used for fuel. This is a common feature of stone-walled sites on the highveld (Maggs 1976).

The entrances and orientation of the settlement indicate that cattle were driven into the kraal areas from the north. Cattle destined for CAB were probably driven to the junction between CAB and CAA, and then into the centre. The cattle drive for CAA appears to have been considerably longer. The thick front walls of households at Tr V, IX and IV, and the lane at the southeast end of the site, suggest that cattle were taken all the way to the south end and then into CAA near the Tr I/II household. This arrangement is similar to the nearby Boshoek site in the Suikersbosrand (Huffman 1986).

The two large cattle enclosures in CAA suggest that two senior men from different families lived in this portion of the settlement. The headman probably lived in the Tr I/II household because it is the largest and at the back. For similar reasons the headman in CAB probably lived in the Tr VIII area.

The households commonly followed a bilobial pattern (cf. Maggs 1976), that is the sleeping hut separated large front and back courtyards. The Tr V area illustrates this pattern (Figure 9): low stones formed the core of a narrow mud wall that defined the front courtyard, while the sleeping hut was located midway between the stone walls forming the back courtyard.

As agropastoralists, these households cultivated fields of grain as well as herded cattle. No carbonised seed remains were recovered, but grindstones from other contemporaneous sites show that maize was one of the crops. Sorghum seeds from Klipriviersberg 5/65 (Mason 1986) show that this grain was also cultivated. These grains were traditionally stored in bins or platforms

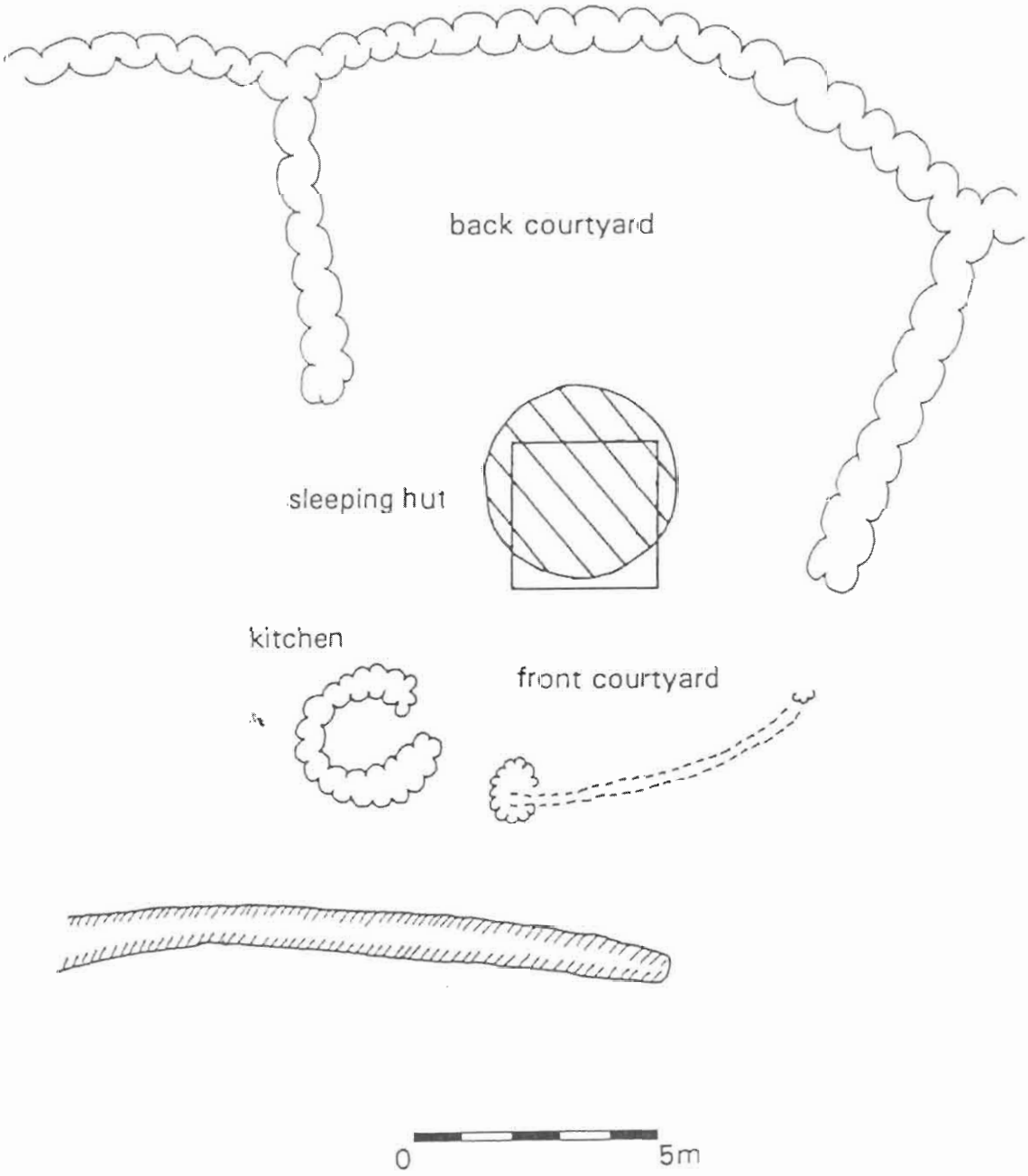

Figure 9. Plan of bilobial Household VI.

xt to cattle kraals and in the back courtyards of the bilobial households. At eyersdal a stone platform near Tr III appears to have been a grainbin support, nd rock outcrops in other areas may also have served this purpose.

he lack of charcoal and baked daga in the residential zone shows that the settlement did not burn down. The lack of whole pots and other items indicates that the people had sufficient time to evacuate and take their goods with them. The few decorated fragments belong to the same late phase of the Moloko Tradition that was found in the Klipriviersberg sites (Mason 1986:591-592), and conclusively associates these settlements with Sotho-Tswana people.

alculate the population, one first determines the number of bilobial eholds. Unfortunately, the huts did not burn down, and so an exact er is not possible. Nevertheless, the plan together with the excavation llow us to make an estimate. First, the units with kitchens designate households: there are six. Four others (Tr V, IX, XV and an ated area) probably also qualify. We then multiply this number by a o, for example 3 children for each married couple. The other arcs ont court walls and kitchens (e.g., X, XIV and XVI) may have housed oys or girls. With four bachelors each, the total becomes 66. If one he variability caused by infant mortality, accident and disease, then ople is a fair estimate of the population.

Six ot s formerly existed around the koppie. If we use the same estimat nit, then some 300 to 450 other people lived nearby. From areal photogra ere appear to about 90 total units concentrated around the eastern er the Klipriviersberg, including Meyersdal koppie. Thus there were probably 4 o 6750 Sotho-Tswana people living in the area between AD 1750 and 18

A more accurat population figure and overall interpretation of the excavated site would be posible if the walls were reconstructed.

RECONSTRUCTION

We reconstructed part of the east wall of CAA (Figure 10) as an experiment to determine how long it originally took to build the walls. It took six men twelve hours to dismantle and rebuild about 9 m of walling averaging 1.5 m high. With this formulae one linear metre takes 8 man hours to complete. The settlement incorporates about 308 metres of similar size walling in the two central areas, and about 9.7 m of kitchen walling. About 97 m of lower walling surrounds the settlement, and 10 m more forms the large front lapa walls. This lower walling is about half the size of the reconstructed walling and presumably took half as long to build. The following table presents the estimated man hours expended on each type of walling using the two ratios.

Table 3. Man Hours for Each Type of Walling.

Type of Walling	Length (m)	Ratio	Total mhr
Central Area A	181.0	8mhr/m	1448.0
Central Area B	127.0	8mhr/m	1016.0
Kitchens	9.7	8mhr/m	77.6
Outer Walling	97.0	4mhr/m	388.0
Large Lapa Walls	10.0	4mhr/m	40.0
			2969.6

If the stone was nearby, which it probably was, and if there were 10 men available, which is likely considering the other settlements nearby, then the walling could have been erected in 37.1 eight hour days. In more conventional terms the total represents a little less than eight 40 hr weeks.

RECOMMENDATIONS

Archaeological reconstructions are popular because they bring history alive. The reconstruction itself is a type of research and experimentation, while its visual impact provides a special opportunity for interpretation, education and tourism.

Figure 10. Reconstructed wall in background and collapsed walls in foreground.

The Meyersdal site is an ideal candidate for reconstruction because it is a relatively recent example of a common type of Sotho-Tswana settlement. Sotho-Tswana ethnography is therefore directly relevant, and this direct link males it possible to present an authentic reconstruction. Furthermore, the site hasbeen excavated, sand we know that there are no significant deposits that 'tourism erosion' can damage.

The purpose of this reconstruction should be established at the outset. Located in the middle of a largely white urban environment, Meyersdal Nature Reserve is unlikely to become a Sotho-Tswana cultural centre. This possibility should not be automatically excluded in the future, but the primary purpose of the reconstruction now should be to educate people about traditional Sotho-Tswana life in the recent past. We therefore believe the focus should be on international and local tourists on the one hand and school children on the other.

The reconstruction itself will involve considerable research, it could also be a tourist attraction in itself and it will be costly. For these reasons, we believe the reconstruction should proceed in stages. The first stage should concentrate on the south portion of the site; this includes the CAA cattle kraals and households I/II, IV, VI and the unexcavated areas in between. By concentrating on the south portion, one will have the headman's household and the largest cattle kraals.

If possible, one should use Sotho-Tswana to help with the first reconstructions (see Appendix). Their participation is obviously desirable but not mandatory because house features have changed. Modern traditional houses, for example, use western-type doors rather than the sliding doors found at Suikerbosrand and Klipriviersberg. Rather than a specific group, then, it is important to involve people who are familiar with traditional dwellings. These people can train a local team.

Most importantly, one should involve Sotho-Tswana who are knowledgeable about their traditional culture. They will be invaluable in augmenting detail not available in the published ethnographies, and they can also help to train guides.

The second stage of reconstruction, we believe, should be used as a tourist attraction. It could therefore proceed in short periods for special occasions.

Finally, to complement the reconstruction, we recommend the development of an interpretive centre at the entrance to the Reserve. This centre should present the broad history of Sotho-Tswana speaking people in the context of the even broader history of Bantu speakers in southern Africa. Thus , the more static interpretive centre will provide the historical context for the 'living history' presented in the reconstructed village.

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