

10/10/05
10/10/05
7/10/05
8/10/05

**THE ARCHAEOLOGICAL INVESTIGATION OF A
POSSIBLE COPPER SMITHY ON ASKOPPIES, A LATE IRON AGE
TSWANA SITE ON THE VREDEFORT DOME, NORTHWEST PROVINCE**

For:

***THE ARCHAEOLOGICAL SOCIETY (TRANS-VAAL BRANCH)
P. O. Box 41050
CRAIGHALL
2024***

Work conducted and report prepared by:

ANTON PELSER

NATIONAL CULTURAL HISTORY MUSEUM
P. O. Box 28088
SUNNYSIDE
0132

Telephone - (012) 324 6082
Telefax - (012) 328 5173

REPORT: ***2005KH38***

Date of work: ***October 2004*** Date of report: ***April 2005***



SUMMARY

Askoppies is a large complex of stone walled settlements situated on the farm Tygerfontein 488 IQ, in the Potchefstroom district of the North West Province. The name 'Askoppies' alludes to extensive ash middens associated with stone walling at the site. The aims of the earlier (1998 – 2001) archaeological research at the site was to determine the time span of Iron Age settlement at Askoppies, determine the identities of the people who settled at the site during the Late Iron Age, and to reconstruct and interpret settlement layout and domestic economy. The 2004 excavations aimed at recovering more evidence regarding the nature and extent of metal working at the settlement. During the earlier archaeological work, some evidence regarding this was uncovered, including pieces of slag, a number of tuyere fragments, as well as copper and iron artifacts, such as earrings and hoes. A large rock anvil, or smithing unit, located roughly 50 m to the west of this hut, are further evidence of metal working activities taking place at Askoppies. It is this feature that formed the focus for the 2004 excavations.

CONTENTS

SUMMARY.....	2
CONTENTS.....	3
INTRODUCTION.....	4
AIMS.....	5
METHODOLOGY.....	5
DESCRIPTION OF THE AREA.....	6
THE ARCHAEOLOGICAL EXCAVATIONS.....	6
DISCUSSIONS.....	7
• <i>Faunal remains</i>	
• <i>Ceramics</i>	
• <i>Slag</i>	
• <i>Stone objects</i>	
CONCLUSIONS.....	9
REFERENCES.....	9
PROJECT TEAM.....	10
APPENDIX 1- MAP OF THE AREA INDICATING THE LOCATION OF THE SITE.....	11
APPENDIX 2 - DRAWING OF THE SITE WITH LOCATION OF SMITHY AND EXCAVATION	12
APPENDIX 3 - PHOTOGRAPHIC DOCUMENTATION.....	13
APPENDIX 4 – FAUNAL ANALYSIS REPORT	18

THE ARCHAEOLOGICAL INVESTIGATION OF A POSSIBLE COPPER SMITHY ON ASKOPPIES, A LATE IRON AGE TSWANA SITE ON THE VREDEFORT DOME, NORTHWEST PROVINCE

INTRODUCTION

Askoppies is a large complex of stone walled settlements situated on the farm Tygerfontein 488 IQ, in the Potchefstroom district of the North West Province. The name 'Askoppies' alludes to extensive ash middens associated with stone walling at the site. It is located on the world famous Vredefort Dome, one of the world's oldest and largest meteorite impact structures, between 26°51'33" S and 27°13'11" E (See Appendix 1).

Maggs argued that the concentration and variety of Iron Age settlements on the Vredefort Dome made it a valuable area for research. Besides the work at Askoppies, the only other in depth archaeological research on the Dome has been Mike Taylor's work at Buffelshoek (not far from Askoppies) in 1979. The name 'Askoppies' alludes to extensive ash middens, some over 30 m in diameter and 3 m in height, associated with stone walling at the site. The Askoppies LIA settlement complex is extensive, covering an area of a few square kilometers. Although it is difficult to estimate how many people lived here at any one time, it must have been a few thousand.

The aims of the earlier (1998 – 2001) archaeological research at the site was to determine the time span of Iron Age settlement at Askoppies, determine the identities of the people who settled at the site during the Late Iron Age, and to reconstruct and interpret settlement layout and domestic economy.

Most of the radiocarbon dates from Askoppies fall between the late 1670s/early 1680s and early 1800s. The aggregated nature of the complex is typical of Tswana settlements during the *difaqane*. A lack of European artifacts suggests that Askoppies was abandoned by the mid 19th century.

On the basis of the settlement plan and pottery, the original occupants of Askoppies were most likely Rolong, or at the least part of the southwestern Sotho-Tswana cluster. The impact of the *difaqane* however should not be disregarded. Many different groups aggregated into larger communities for mutual protection and intense interaction would have taken place. One specific group therefore might not have been solely responsible for the ceramic assemblage at Askoppies.

The settlement plan at Askoppies is typical of the so-called Central Cattle Pattern (CCP), with hut bays surrounding livestock enclosures in the center. The settlements at Askoppies are similar to Maggs' Type Z and Taylor's Type IIb sites. Agriculture played an important role in the domestic economy of the settlement, with sorghum evidently the principal crop. Clumps of these were recovered from the excavations. The sheer number and the size of granaries at the site, attest to the success of agriculture. Besides cattle, sheep, goat, chicken, steenbok, springbok, blesbok and zebra formed part of the meat diet. Around 50% of all slaughtered animals were non-domestic, with sheep/goat contributing half of the domestic meat

sample. Other meat sources included springhare and scrub hare, tortoise and guinea fowl. Riverine food sources included barbel and other fish, crab and freshwater mussel, while land snails may have supplemented the diet. Thus hunting, fishing and gathering also played a part in addition to herding.

A fairly large number of bone and stone tools are evidence of hide working. The tools include bone scrapers, needles and awls and stone scrapers similar to those found by Mason (1986) at Olifantspoort. The remains of aardwolf, cheetah and leopard in the sample are further indication of hide or skin working. These animals were probably hunted or snared for their skins, rather than for their meat (Hall 1987). Trade formed part of the domestic economic activities, with ivory artifacts, cowry shells and a glass bead evidence of this.

AIMS

The 2004 excavations aimed at recovering more conclusive evidence regarding the nature and extent of metal working at the settlement. According to Maggs (1976:14), the area, with its complex geology and abundant tree cover, would seem to be a likely area in which to find a smelting industry. During the earlier archaeological work, some evidence regarding this aspect was recovered. This included pieces of slag (possibly copper), a number of tuyere fragments, as well as copper and iron artifacts, such as earrings and hoes.

Perhaps the best indication of metal working being practiced at the settlement was a cache of 14 partially finished copper earrings found on the floor of a hut in the chief's homestead. Recovered on the floor as well were small pieces of slag and a whetstone fragment. A large rock anvil, or smithing unit, located roughly 50 m to the west of this hut, are further evidence of metal working activities taking place at Askoppies. It is this feature that formed the focus for the 2004 excavations.

METHODOLOGY

Documentation

The documentation comprised the following:

Archaeological excavations - Standard methodology and practice was followed. For this phase of the project I concentrated on a large rock anvil, or possible smithy, in Settlement Unit B.

Photographic - Photographs of the feature and the excavation in general, as well as individual finds and objects, were taken to help with the interpretation of the function of the feature. These photographs also form part of the permanent record of the site, should it be disturbed or destroyed.

GPS Data - A GPS reading of the site, and the feature itself, was taken in order to locate it on the 1:50 000 map of the area (See Appendix 1).

Mapping and Drawing – During this part of the fieldwork no mapping was conducted, as fairly detailed work was done between 1998 and 2002 (See Appendix 2).

Artifact Documentation & Analysis – All cultural material recovered during the excavations were sorted and bagged on site. After being taken to the Museum the material were documented & recorded according to accepted Museum practice, and the expert analysis of the artifacts undertaken.

DESCRIPTION OF THE AREA

The topography of the area is basically flat, open grassveld, although there are patches of more dense bush and trees. The site falls in the Bankenveld vegetational zone (Acocks 1988: 113 - 114). This is the veld of the Witwatersrand and the high undulating country sloping down to the Magaliesberg and of the hills southwards towards the Vaal River.

The geology is characterised by basaltic lavas, agglomerates and tuffs. The basaltic lava was the main source of building material during Iron Age times.

The closest major water sources are the Vaal River (approximately 5 km distant) and the Tierfonteinspruit, between 500 m and 1 km from the settlement. The altitude ranges between 1450 and 1750 m above sea level with the highest point 1521 m. Rainfall varies from 700 - 750 mm per annum, falling mainly in summer. Winters suffer severe frost. Under these conditions, combined with regular burning, the veld is sour and virtually ungrazable in winter.

There are no big, tall trees on the site, most probably removed during Iron Age times. The wood from these trees were used for firewood, the big amount of middens and size of some of them evidence of this, or building material. Although no indication of Iron Age agriculture, in the form of ploughed fields, was found, sorghum seems to have been grown, with clumps of carbonised sorghum found in excavations at the site. Agricultural activities in the past, as well as cattle grazing, could also have played a part in the deforestation of the site. Even today, the site is used seasonally for cattle grazing.

THE ARCHAEOLOGICAL EXCAVATIONS

Excavation 8 (the first 7 done during earlier work) was located around the smithing unit in Settlement Unit B (or chief's homestead), and measured 3 m x 3 m. The smithing unit is made up of, over and above the anvil, a number of large upright rocks, packed in a semi-circle. The anvil has a number of hollows (formed by hammering and grinding) and grooves (seemingly caused by sharpening or shaping metal artifacts). One of the other upright stones has a few grooves as well. Large pieces of slag were lying around the edge of the semi-circle. The anvil has a height of approximately 30 cm, and is 70 cm long and 39 cm wide.

The excavations revealed a very interesting occurrence, forming part of the smithing unit and located directly behind the anvil and other upright stones. It is a small stone

circle, 1.40 m x 1.10 m big, constructed of upright stones. In addition, after removing a few centimeters of topsoil, a stone paved 'floor' was uncovered on the inside of the circle. A lower grinding stone, also used as a hammer stone, was on top of the paved floor, while pieces of slag, bone and pottery were also found here. Once the stone paving was removed the soil became softer, although some smaller stones were still found. More bone and teeth, as well as pottery, were recovered inside the stone circle. In what seems to have been a pit (underneath the paved floor/platform) sterile soil was reached at a depth of approximately 45 cm. This is more than double the depth of the rest of the excavation.

In the rest of the excavation a fairly large amount of bone, teeth and pottery were recovered, as well as a big number of slag pieces. Fragments of a possible tuyere were also found, as well as a whetstone fragment. These artifacts, and the slag, are at this stage the only positive evidence of this feature being associated with metal smelting and/or working. A section of another small stone circle, as well as signs of clay walling or floor, was opened up in the southeastern part of the excavation. This find could be investigated at a later stage.

DISCUSSION

The 'smithy'

It is difficult at this stage to reconstruct what the exact function of the feature was. However, looking at the pieces of slag, and the physical evidence of the rock anvil, this could be a metal working activity area, or smithy. Furthermore, a second small stone circle with pieces of slag around and inside, located only 10 m north-west of the smithing unit, have been identified in the area, and could point to this area being utilized specifically for metal working. The location of the possible smithing unit (rock anvil) is also of interest. It is located inside a residential area, albeit not in the center. As a rule, iron smelting was performed outside and smithing inside the residential unit. Evidence from Madikwe Game Reserve to the north indicates that Tswana people smelted copper in the back courtyard (Hall 2000: 47), and although no copper furnaces have been found at Askoppies so far, the slag found here might still prove to be copper-base.

The next phase of fieldwork at Askoppies will concentrate at finding more evidence of metalworking. Excavations will concentrate on the second stone circle and concentration of slag around it in the hope of finding a possible copper furnace.

Faunal Remains

A detailed report on the faunal analysis is included in Appendix 4. A total number of 1415 unidentifiable bone and bone fragments were recovered from the excavations. Only 53 identifiable bones were recovered, representing two species namely *Bos Taurus* (cattle) and *Ovis aries* (sheep). Nine bones showed evidence of being burnt, while 12 was weathered naturally. A single bone displayed cut marks.

Ceramics

Although a fairly large number of potsherds were recovered, the sample is mostly fragmented and very little decorated pieces were found. Due to the nature of the ceramic sample, we were unable to determine any classes of vessel. This is normally done according to procedures proposed by Huffman (1980). In this, multidimensional types are formed using 3 independent variables: vessel profile, decoration layout (position on vessel) and decoration motif. The intersection between these variables produces classes of vessels present on a site.

A total of 256 undecorated body shards were recovered. A number of vessels are represented. Some are burnished with red ochre, or burnt black. These vessels were probably cooking and/or storage pots. Three of the potsherds show signs of having been used. Their edges are abraded or smoothed, and they might have been either pottery scrapers or spindles.

Only two decorated potsherds (rim pieces) were found. Both are fairly small, with decoration in the form of incisions and finger pinching (on top of the rim) on them respectively. Although this is not much to work on, decorations such as these are typical of the Late Iron Age ceramics found at Askoppies. Thirteen undecorated pieces with rims form part of the sample, representative of at least 13 different vessels. A number of the pieces show signs of ochre burnish. Most of the rim pieces are either flat or rounded. Because of the fragmented nature of the sample no vessel shape or profile could be determined.

The ceramic sample also included 6 pieces of possible tuyeres. Some of these pieces have a glassy substance adhering to them, evidence of metal smelting. Besides the slag, they are the only physical evidence of the possible metal smelting function of the feature excavated.

Slag

A fairly large amount (more than 1.5kg in weight) of slag was retrieved from around the edge of the 'smithy', as well as inside the pit and the rest of the excavation. Although no scientific analysis of these have been undertaken as yet, some slag from Askoppies (from earlier excavations and from the smithy) was sent to the University of the Free State for analysis. The results are still awaited. The individual slag pieces are however very lightweight, indicating possibly a copper rather than iron origin.

Another origin for the slag can at this stage not be ruled out as yet, as it might be thatch-slag, the result of a grass roofed clay structure that burnt down, or burnt cow dung (See Dreyer 1997).

Stone objects

Five worked, or used, stone objects were recovered from the excavation. The first one is a rubbing stone or upper grinder. It was found *in situ* on the paved stone circle

behind the smithy. It could've had another function as well, as the one side of the stone is uneven and seems to have been used as a hammer stone.

The other 4 objects include a broken rubbing stone, stone flakes-tools (possible scrapers) and a possible whetstone fragment. Last mentioned are similar to a whetstone fragment found on the floor of Hut 7 during earlier excavations. This hut is located close to the 'smithy', and contained the cache of copper earrings as well.

CONCLUSIONS

To conclude, although the 2004 excavations at Askoppies were relatively successful, conclusive evidence of metal smelting and working at the settlement are still somewhat lacking. The rock anvil is indication of, I believe, the working and shaping of metal artifacts at the site, but so far no clear-cut evidence of metal smelting have been found. The slag found on the surface around the anvil and in the excavations could be the result of smelting, but the expert analysis of slag from Askoppies has not been completed. Further archaeological investigation is therefore needed here to find irrefutable evidence of metal smelting and working at the settlement. A small stone circle, with slag concentrations, located a few meters to the west of Excavation 8 will be the object of excavations in the near future.

The excavations at the rock anvil, or smithy, also revealed another interesting feature. This included a stone circle behind the anvil, built of small upright stones and paved with smaller stones. On top of the paved 'floor' some pieces of pottery, bone and tine pieces of slag were recovered, as well as a hammer stone/grinding stone and a bone spatula. The most interesting aspect of this feature, however, is that once the 'paving' was removed, a deliberately covered pit was revealed underneath. This pit contained fragments of bone, as well as teeth, from at least 3 heads of cattle and sheep. A ritual function for the paved stone circle and pit is proposed, specifically in the light of the features' position within the settlement (see Appendix 4).

Further archaeological research at Askoppies will be conducted during 2005, specifically aiming at finding more evidence regarding metal working activities at the settlement during the Late Iron Age. Results of this work, as well as the subsequent analysis of the slag found in Excavation 8, will be included in future reports.

REFERENCES

- Acocks, J.P.H. 1988. Veld Types of South Africa. Memoirs of the Botanical Survey of South Africa, No.40. Pretoria: Botanical Research Institute.
- Boeyens, J.C.A. 2000. In Search of Kaditshwene. South African Archaeological Bulletin. 55: 3-17.
- Dreyer, J. 1997. Slag from Late Iron Age sites: Metal-working or cow dung? In: Van Schalkwyk, J. (Ed.). Studies in Honour of Professor J.F.Eloff. Pretoria: Research by the National Cultural History Museum 6: 94-103.

Hall, M. 1987. The Changing Past: Farmers, Kings and Traders in Southern Africa, 200 - 1860. Cape Town: David Phillip.

Hall, S. 2000. Forager lithics and early Moloko homesteads at Madikwe. Natal Museum Journal of Humanities. 12:33-50.

Huffman, T.N. 1980. Ceramics, Classification and Iron Age Entities. African Studies. 39:123-174.

Kuper, A. 1982. Wives for cattle: bride wealth and marriage in southern Africa. London: Routledge and Kegan Paul.

Maggs, T.M.O'C. 1976. Iron Age communities of the southern highveld. Pietermaritzburg: Occasional Publications of the Natal Museum, No.2.

Mason, R.J. 1986. Origins of black people of Johannesburg and the southern western central Transvaal AD350 - 1880. Johannesburg: University of the Witwatersrand Press.

Pelser, A.J. 2003. Askoppies: Late Iron Age Sotho-Tswana Settlement on the Vredefort Dome. Unpublished M.A. dissertation. Johannesburg: University of the Witwatersrand.

Scott, K. 2005. Faunal Report on Askoppies – Chief's Homestead. Unpublished report. Centurion.

Taylor, M.O.V. 1979. Late Iron Age settlements on the northern edge of the Vredefort Dome. Unpublished M.A.dissertation. Johannesburg: University of the Witwatersrand.

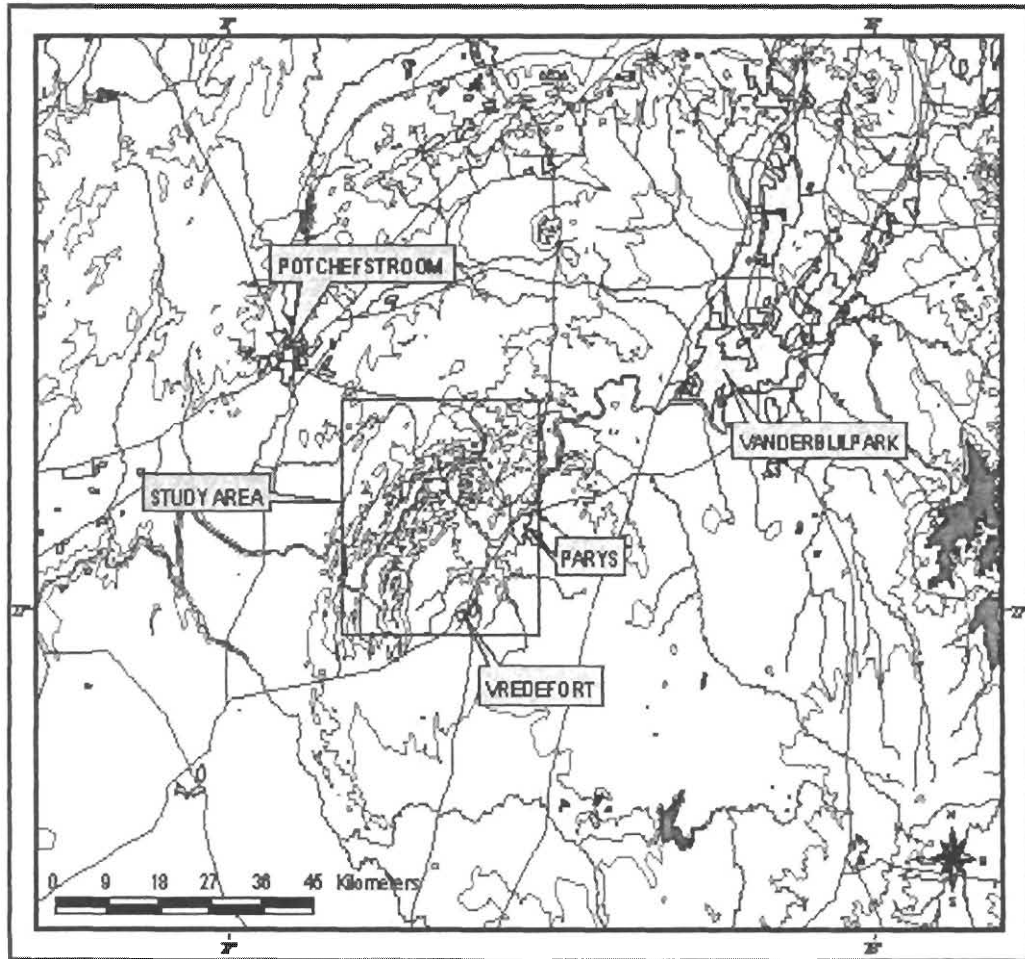
PROJECT TEAM

A.Pelser, Principal Investigator and Researcher, NCHM (Curator: Archaeology)

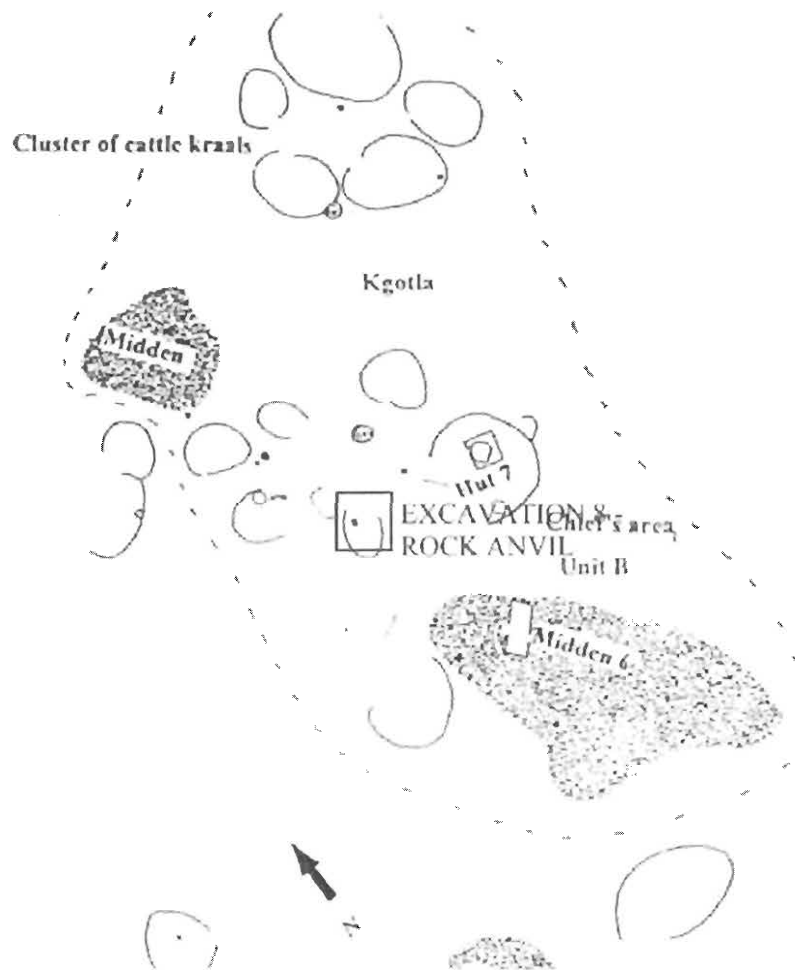
Me. I.Masiteng, NCHM – Assisted with documentation and analysis of cultural material

Me. K.Scott – Archaeozoologist: Expert analysis of faunal remains

**APPENDIX 1 – MAP OF THE AREA SHOWING
THE LOCATION OF THE SITE**



**APPENDIX 2 – DRAWING OF THE SITE INDICATING
THE LOCATION OF THE SMITHY AND EXCAVATION**



APPENDIX 3 – PHOTOGRAPHIC DOCUMENTATION



Fig. 1. Tuyere fragments from Askoppies, evidence of metal smelting.



Fig. 2. Cache of copper earrings on the floor of Hut 7. Earrings are not all complete, but in process of being manufactured.

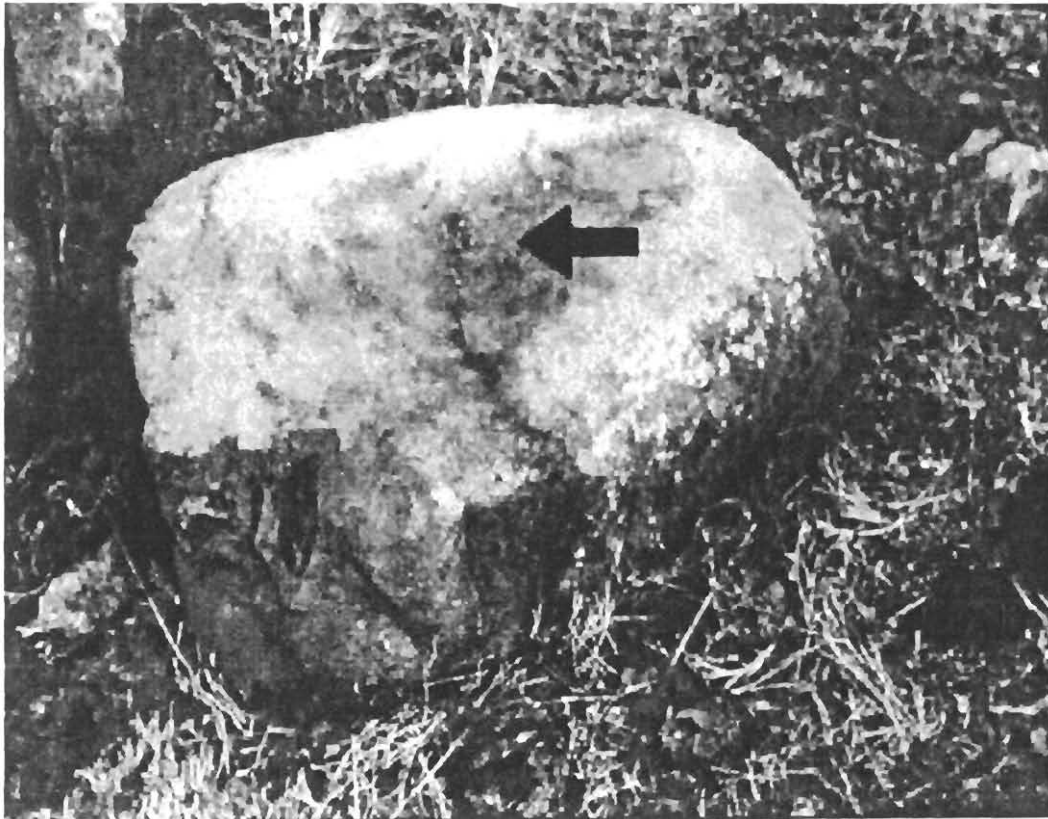


Fig. 3. Rock anvil, or smithy. Pieces of slag around it are indicated by red circles. The black arrow indicates smoothed and hammered surface.



Fig. 4. Excavation 8. The rock anvil in front, and the stone circle behind it is clearly visible.



Fig. 5: The paved stone circle behind the smithy. Note the bones, pottery and hammer stone/grinding stone indicated with arrows.

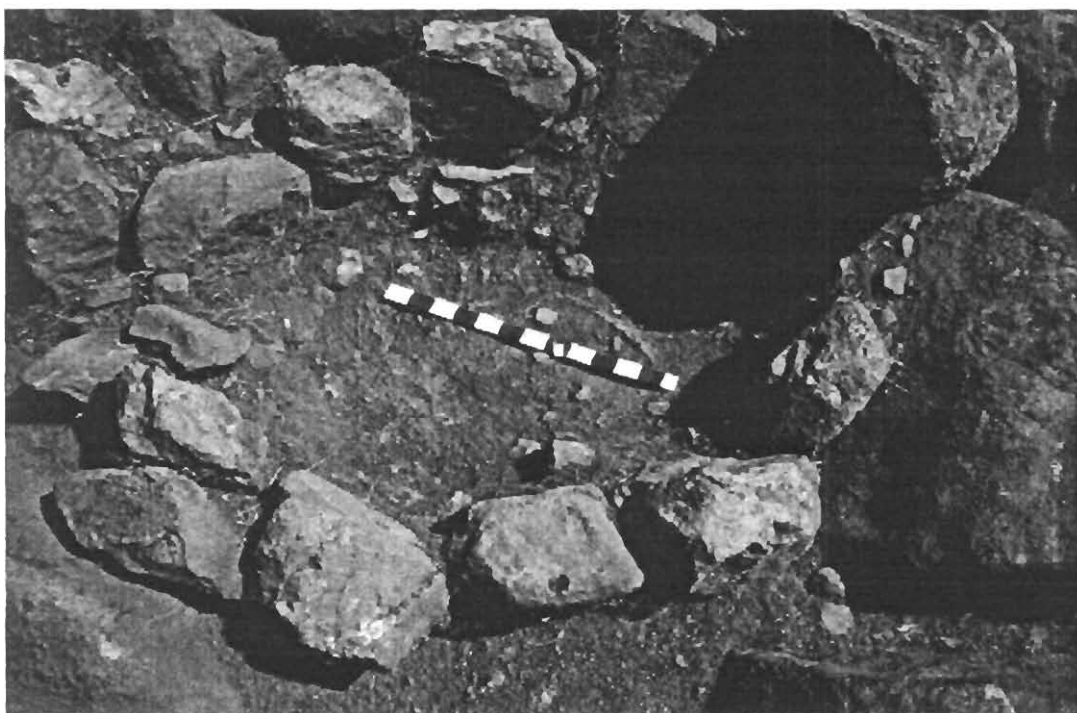


Fig. 6. The pit, after removal of 'paving'. A large amount of bone and pottery was recovered from here.

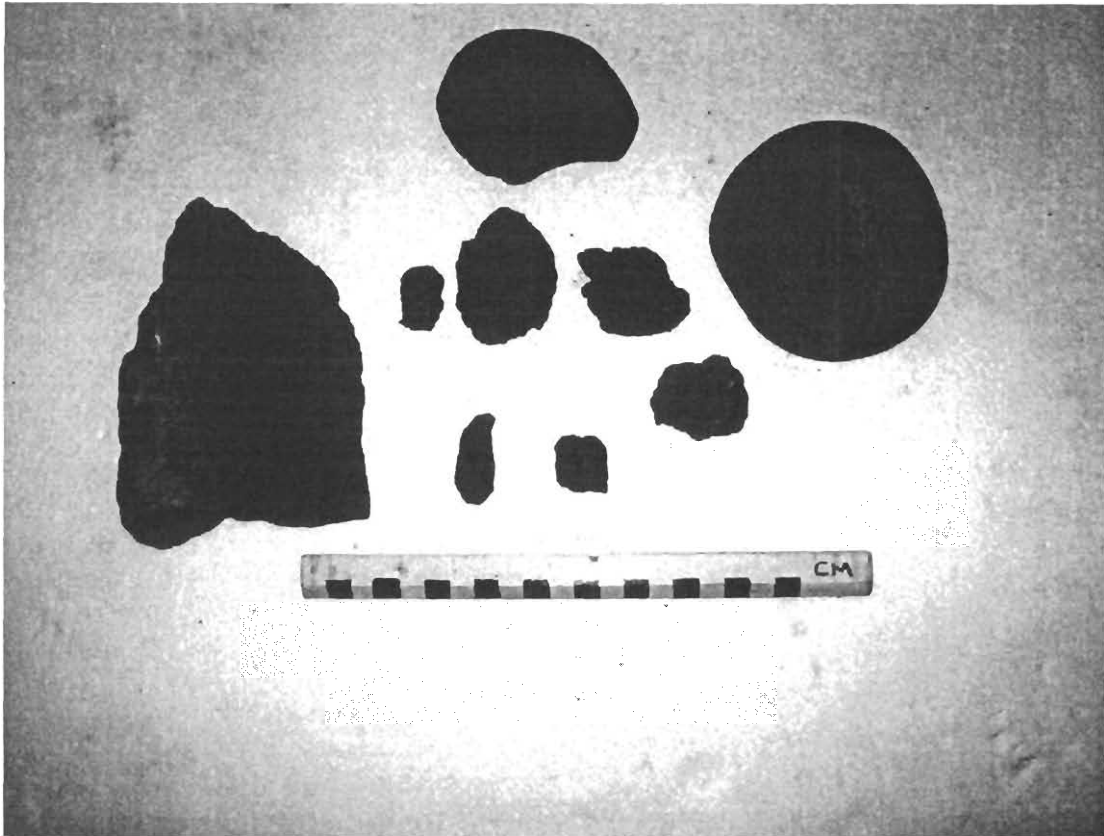


Fig. 7. Tuyere fragments, slag and various stone tools, including a whetstone (extreme left), from the excavation of the 'smithy'.

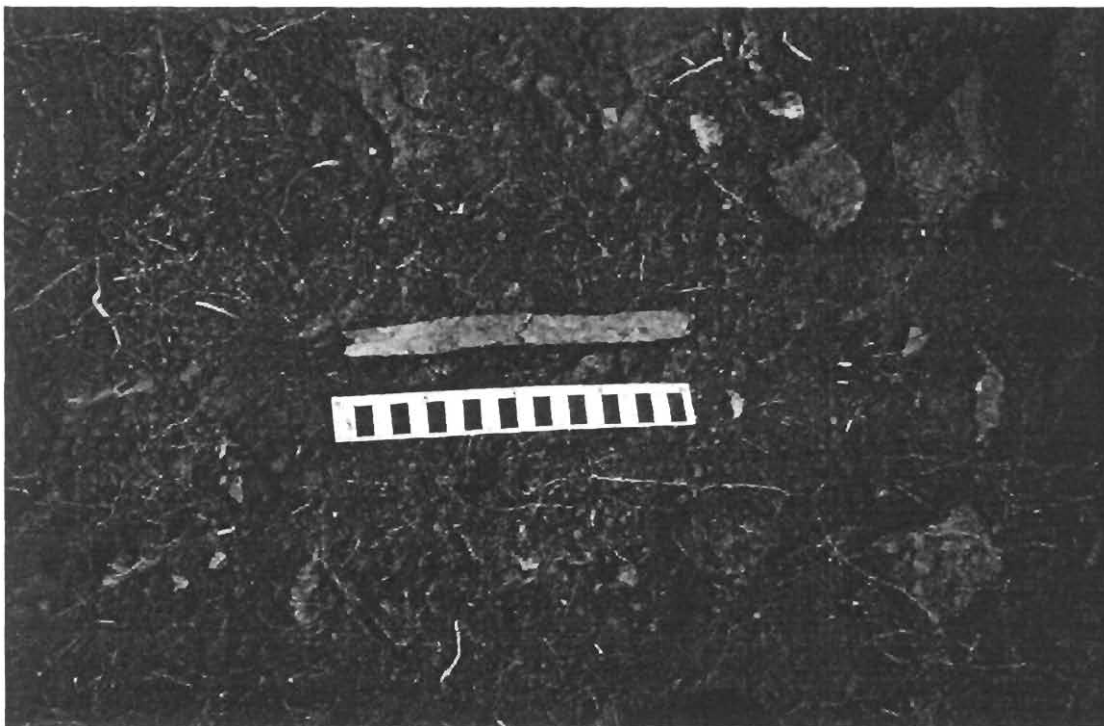


Fig. 8. Bone spatula found in the stone paved circle behind the smithy. Made from a rib, the objects' edges are smoothed and rounded.

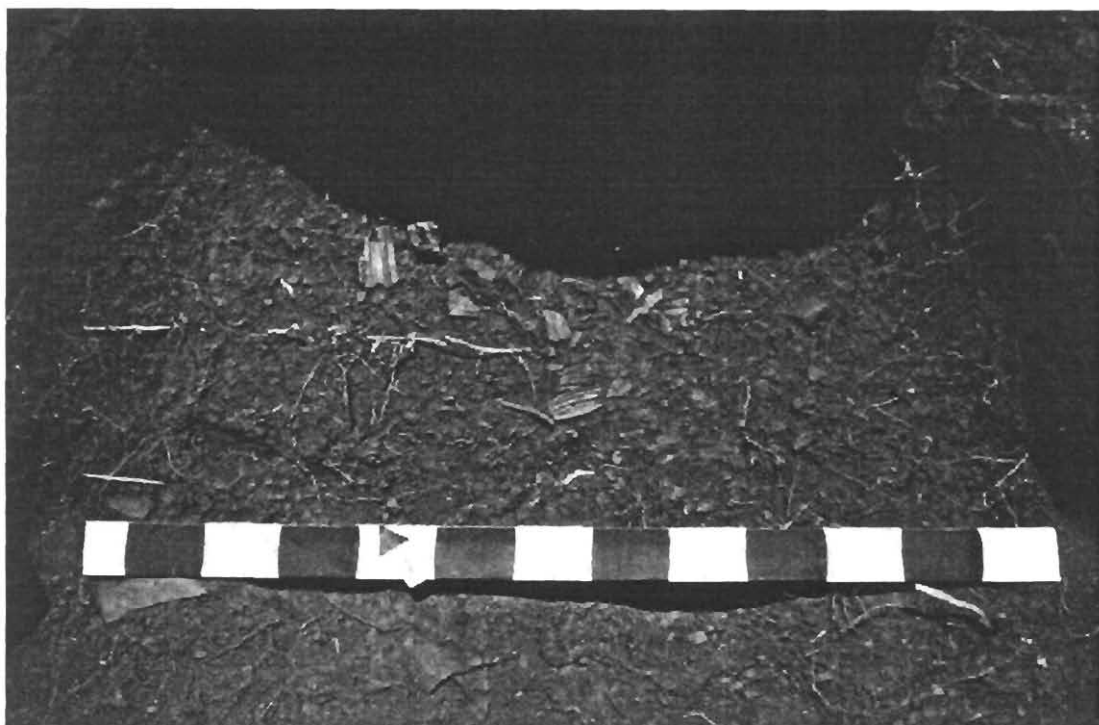


Fig. 9. A concentration of animal teeth found underneath the stones used as paving for the circle behind the smithy. These teeth are from both sheep and cattle.



Fig. 10. Stone circle near 'smithy'. One half of circle indicated by rocks outlined in red. Pieces of slag in red circles. Could this be remains of a furnace?

APPENDIX 4 – FAUNAL ANALYSIS REPORT

Faunal Report on Askoppies – Chief's Homestead

Karin Scott

P.O. Box 61547; Pierre van Ryneveld; Pretoria; South Africa; 0045; kavscott@mweb.co.za

Introduction

The Chief's Homestead is part of a larger site called Askoppies. This terrain is situated in the North West Province near the Vredefort Dome. It is a Late Iron Age terrain associated with the Tswana people.

Cultural Artefacts found

Please refer to Mr Pelsers' report where the cultural artefacts found are discussed.

Excavation Methods and Methods used in Faunal Analysis

One excavation measured at 3m by 3m and 0.5m deep was undertaken.

A mesh size of 1 mm was used at the excavations.

The faunal material was sorted into identifiable and not identifiable fragments; the identifiable analysis was done with the help of the Transvaal Museums' Archaeozoology Department's collection. The analysis was done at international standards as promoted by ICAZ (International Council of Archaeozoology).

Age class determination where applicable was done according to Voigt (1983) and Plug (1988). The quantification methods MNI, NISP and QSP used were done in accordance to the methods set out by Plug, I (1988).

Complete bones and worked bones were measured using a calliper with an accuracy of 0.1mm as part of the standard archaeological analytical methodology; these measurements are not included here but are kept on file. The measurements were taken using the standard points of measurements described by Von den Driesch (1976) and Peters (1986)

Weathering was estimated by comparison to the rest of the sample analysed.

Faunal Sample

➤ Unidentifiable

The total sample bones that could not be identified were 1415 with a mass of 1500g.

➤ Identifiable

The total sample bones that could be identified were 53 with a mass of 411g. All species identified occur and did occur in the region.

A variety of two species were identified. Most commonly found was *Bos taurus* followed by *Ovis aries*. The excavation that produced the largest identifiable sample (43 specimens) was Rock anvil / Stone circle.

➤ **Age classes identified**

One juvenile *Bos taurus* incisor was identified in Rock anvil / Stone circle excavation 8. This layer also yielded a juvenile Bov II L – naviculo cuboid and an aged *Ovis aries* RL2M. In excavation 8 an erupting RL2M of an *Ovis aries* was identified.

➤ **Taphonomy and worked bone**

Out of a total number of specimens a total of nine bones were burnt. In addition 12 was weathered, and only one displayed cut marks.

Discussions and Conclusions

The material hails from an area within the Chief's homestead. The stone anvil and a stone wall was found in the area. On excavation a "pit" covered with small stones was discovered and some faunal material was discovered within this "pit".

The bone were those of domestic animals *Bos taurus* (cattle) and *Ovis aries* (sheep). This is not unusual as these people were known to have herded both these animals.

The deliberate covering of the "pit" with little stones could indicate that this is more than a dumping pit and that it might have a ritualistic connotation and may indicate an offering to the ancestors. Through the ethnographic record we know that the head of the animal was a preferred cut and was usually preserved for the chief. The amount of teeth discovered in the area and in the "pit" seems to be in keeping with this information.

The weathering of the bone is due to prolonged exposure to the elements. This is not unusual as the excavation is not very deep.

As the area excavated is small the conclusions drawn are tentative. The interesting nature of the "pit" and the possible connection to ritualistic practices warrants further investigations of the area.

Acknowledgements

I wish to thank Mr A Pelsler for allowing me the opportunity to do the analysis for this terrain.

Reference list

Meester, W., Rautenbach, I. L., & Dippenaar, N. S. 1986 *Classification of southern African mammals*. Transvaal Museum monograph No 5 Pretoria

Peters, J., 1986. *Bijdrage tot de archeozoölogie van Soedan en Egypte*. PhD thesis. Gent: Rijksuniversiteit.

Plug, I., 1988. *Hunters and Herders: An Archaeozoological study of some prehistoric communities in the Kruger National Park*. Dphil thesis University of Pretoria

Smithers, R. H. N. 1983. *The mammals of the Sub-Saharan Africa*. University of Pretoria

Von den Driesch, A., 1976. *A guide to the measurements of animal bones from archaeological sites*. Peabody Museum Bulletin 1. Massachusetts: Harvard University.

Tables

Identification NISP QSP MNI Mass D U P C P-C Shell / Carapace Burnt

Rock anvil / Stone circle

Excavation 8

<i>Bos taurus</i>	17	15	3	182	1	12	3
<i>Ovis aries</i>	7	7	2	30		7	
Bov III	19	8	2	107		9	10

(Rock anvil)

Excavation 8

<i>Ovis aries</i>	1	1	1	10		1	
Bov II	2	1	1	11			2

Rock anvil / Circle

Excavation 8

Bov II	2		1	13			2
--------	---	--	---	----	--	--	---

Rock anvil / Circle

Bone & Teeth from "Pit"

Excavation 8

<i>Bos taurus</i>	1	1	1	27		1	
<i>Ovis aries</i>	4	4	2	31	1	3	

Square	Level	Spit	Skeletal Part	Damage	Amount	Total (g)	Mass	
Chiefs Homestead	Rock anvil / Stone circle	Excav. 8	Misc	Weathered	2	15	25	
			Skull				15	26
			Vert	Weathered	4	4	42	
			Bone flake	Burnt	3	1257	1237	
				Weathered	1			
			Enamel	Burnt	6	23	23	
			Rib				101	147

Skeletal Element

Skull	15
Enamel	23
Vertebrae	4
Ribs	101
Bone flakes	1257
Misc	15
Total	1415
Mass	1500g
Burnt	9

Species	NISP QSP MNI Mass			
Rock anvil / Stone circle				
Excavation8				
<i>Bos taurus</i>	17	15	3	182
<i>Ovis aries</i>	7	7	2	30
Bov III	19	8	2	107

(Rock anvil)				
Excavation 8				
<i>Ovis aries</i>	1	1	1	10
Bov II	2	1	1	11

Rock anvil / Circle				
Excavation 8				
Bov II	2		1	13

Rock anvil / Circle				
Bone & Teeth from "Pit"				
Excavation 8				
<i>Bos taurus</i>	1	1	1	27
<i>Ovis aries</i>	4	4	2	31

Species	NISP QSP MNI Mass			
Rock anvil / Stone circle				
Excavation8				
<i>Bos taurus</i>	18	16	3	209
<i>Ovis aries</i>	12	12	2	71
Bov II	4	1	1	24
Bov III	19	8	2	107