

## ■ BOTSWANA

### Archaeological Survey and Excavation in Southeast Botswana, 1992

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#### Introduction

This report outlines the results of an eight week season of archaeological fieldwork conducted in the areas around the modern settlements of Kanye and Ranaka in the Southern District of Botswana, between May and July 1992. Previous knowledge of the archaeology of this area was based mostly on a number of chance discoveries and localised investigation of Stone Age and Iron Age materials (e.g. Pahl 1971, 1974). With the exception of van Waarden's impact assessment and mitigation work along the route of the new Gaborone-Kanye road (1987, 1992), no systematic survey or excavations had been carried out in the area.

The primary objectives of this initial season of fieldwork, therefore, were to establish the cultural sequence for this area, and the relationships between this material and the archaeology of neighbouring parts of Botswana and northern South Africa (especially Gauteng and North West Provinces). As a university-based project, subsidiary but no less important aims of this research were to expose students to field archaeology and train them in a variety of survey and excavation techniques. Although priority was given to students intending to enroll in the recently established Single Major in Archaeology at the University, individuals studying other related subjects such as History and Environmental Sciences also participated.

Two further seasons of fieldwork in the area have now been completed. These will be reported

in due course. It is worth noting here, however, that as the project has progressed, its focus has also shifted so that more emphasis is now being placed on the development of settlement in the research area over the last two thousand years, especially in relation to the changing patterns of resource utilisation. As part of this program of research, various analytical studies of ceramics, charcoals and metallurgical debris are scheduled to begin later in 1996. Further survey work is also planned for this year.

#### Research Area

Kanye and Ranaka are situated towards the southern end of Botswana's eastern hardveld, some 70 - 80 km south-west of the capital city, Gaborone (Figure 1). Geologically, the area is quite varied; a fact also reflected in the local topography. The basic geology around Kanye is of igneous origin and the landscape consists mainly of a series of sparsely vegetated, rolling hills. A few km to the northeast, towards Ranaka, the Kanye Volcanics give way to a steep-sided, narrow plateau capped by horizontal Waterberg quartzite, running roughly SE-NW across the study area. Known as the Polokwe Hills, the plateau is dissected at intervals along major fault lines by perennial and fossil stream valleys, which are often thickly wooded. Elsewhere, *Acacia* thorn-scrub forms the principal vegetation type (Weare and Yalala 1971).

The terrain on either side of the Polokwe Hills is fairly level, broken only by occasional granite outcrops (kopjes). Soils here are thicker than on either the plateau-top or the hills around Kanye, and are the most suitable for cultivation. However, the low and erratic rainfall regime for the region as a whole, plus the general lack of critical minerals such as phosphorous in the soils, means that even these areas are used principally as rangelands for grazing cattle and small-stock.

Surface water is also scarce. To the east of the region drainage lines form part of the Limpopo watershed, feeding into it via the Notwane River. Headward erosion in these streams is vigorous, and the colluvial plains in this part of the study area are dissected by a series of deep erosion gullies, or 'dongas'. Over-grazing of the area has tended to exacerbate this problem. On the other side of the Polokwe Hills, streams

flow northwest linking up, ultimately, with the drainage system of the Makagadikgadi basin in the interior. Surface flow here is far gentler and stream channels are much less distinct.

### Survey Methods

To date, survey work has been concentrated in two topographically distinct zones. These are (i) the areas along the foot of the eastern escarpment of the Polokwe Hills and the adjacent grazing and agricultural 'lands'; and (ii) the hills and surrounding plains to the east and south of Kanye. Most of the survey work in the former area was conducted over a three week period in May 1992. At the same time, a preliminary survey of the western side of the Polokwe Hills was also carried out. The survey south of Kanye was extended in 1993.

For a variety of reasons, including the small scale of the available maps, lack of prominent features in the landscape and nature of the vegetation cover, judgemental sampling was used throughout to select areas for surface inspection. These were inspected on foot in teams of between five to ten fieldworkers, walking line abreast and spaced between 10 and 50 m apart. Only diagnostic artifacts, such as stone tools, decorated and undecorated rim sherds and decorated body sherds, were collected. Once the extent of the surface scatter had been defined and measured, an additional, representative collection of all artifact categories was normally made. In a few instances the site area was gridded into 10m<sup>2</sup> units for more systematic collection. This strategy was employed more as a training exercise, and was only carried out at sites selected for test excavation.

Initially, several different topographies and micro-habitats such as stream beds, plateau- and hill-tops, valley slopes and colluvial plains were searched. It quickly became apparent, however, that the local erosion and depositional regimes have a determinant effect on the visibility of certain types of archaeological site. Thus, in areas of high erosion, such as at the foot of the Polokwe Hills escarpment and along stream channels, surface scatters of archaeological materials are very common. By contrast, all of the areas of the neighbouring colluvial 'lands' that were searched during the first phase were virtually devoid of sites. Consequently, in order to maximize the

returns of the survey work, subsequent foot-surveys tended to focus on the lower slopes of the Polokwe Hills, the low hills and valley slopes to the south of Kanye and various major stream channels.

It is recognised that the uneven coverage of the survey area has affected the overall distribution of sites located, and that other sites may exist in the areas of low archaeological visibility. In order to assess the extent to which the overall site distribution pattern is an artificial one, a further season of foot-survey over the entire 40 x 30 km study area is planned for 1996. So as to ensure representative coverage, a random, stratified sampling design will be used to select areas for inspection using a combination of surface inspection and test-pitting.

### Survey Results

**Ranaka Environs:** A total of 37 previously unrecorded archaeological sites were located in this area during the 1992 season. The majority of these sites comprise either surface scatters of heavily eroded Iron Age pottery and related materials including the remains of iron-smelting furnaces, or complexes of stone built enclosures and other features (Table 1). In addition, a number of isolated ESA bifaces and other tool forms, two low density scatters of MSA material, and five Historic sites were also encountered. Apart from the occasional isolated tool (which were not collected), no LSA material was found. In June 1992, test excavations were carried out at six Iron Age sites and four Historic (ca. 19th-early 20th century) examples located during the survey (see below).

**Kanye Environs:** The survey work in this area during 1992 was much more limited in scope than that around Ranaka, and only three previously unrecorded sites were located (Table 2). Initial efforts were directed toward defining the extent of a complex of stone-walled enclosures situated a few km to the south of Kanye, in the area known as Sekalaba. The site is known from oral traditions as a former BaNgwaketse capital, which was occupied briefly during the nineteenth century (Schapera 1942). Despite this, only its general location had been recorded in the National Site Register, and little was known about the condition or extent of the surviving remains.

Although comprehensive mapping of the enclosures was not carried out in 1992, detailed and closely spaced line-walking demonstrated that the ruins are distributed over a series of three flat-topped hills intersected by a number of perennial watercourses. The complex covers an area measuring approximately 5 x 2 km, and includes stock enclosures, house sites, stone-walled *dikgotla* (courts) and boundary walls. Traces of iron-working debris, possibly from smithing, were also found as well as numerous grinding and rubbing stones. By contrast, only a few sherds of pottery (all undecorated) were seen and virtually no evidence of middens, both of which are a common feature of sites of a comparable date (e.g. Lane et al., in prep.).

In the course of surveying the Sekalaba ruins, it was also noted that there was a light scatter of ESA material over much of the area. Acheulian handaxes, cleavers and large side-end scrapers all made from local Kanye Volcanics, were among the tool-forms observed; a few examples of these were collected. Subsequent foot-survey of areas around Sekalaba indicated that ESA material occurs across most of the hills immediately south of Kanye. These surface scatters are all of very low density and none qualify for designation as a 'site'.

Preliminary survey of the adjacent Phokojeng 'lands' a few km to the east, however, did locate an extensive complex of ESA/MSA lithic scatters. The largest of these (Mokape), lies within and along the margins of a series of erosion channels. Although parts of this site show obvious signs of post-depositional reworking, several freshly exposed, in situ knapping scatters were also observed. Also located in the same general area as these, but higher up in the depositional sequence, were the remains of a later EIA site, of probable Eiland type. Both the Iron Age and Stone Age components were the subject of more detailed work in 1993, with further studies being conducted on the ESA/MSA transition site in 1994 (Segadika 1995) and 1995 (Owens, in prep.).

### The Excavated Sites

The basic aims of all excavations were to recover dateable materials and establish the quality of preservation and depth of deposits. As with the survey, the excavations also formed part of

student training in field archaeology techniques. All of the units were excavated by hand until either bedrock or sterile soil had been reached. In the majority of cases, 1 x 1 or 2 x 1 m test-pits were employed; the major exception being at 45-D3-16 where somewhat larger areas were excavated. Deposits were sieved using a 5 mm mesh, and finds from different levels were bagged separately. With the exception of the trenches at 45-D3-16 and the individual iron-smelting furnaces at sites 45-C4-18, 45-C4-31 and 45-D3-19, all units were excavated in artificial 10 cm levels.

**Kwahu Hill - 45-C4-16:** This site comprises two components. These are, (i) a cluster of stone walls, enclosures and other features situated on a flat-topped spur roughly mid-way up the north side of Kwahu Hill, and (ii) a light scatter of pottery associated with a few sub-circular stone features at the base of the hill, immediately below the stone-wall complex. Although spatially distinct, it is likely that these two elements are contemporary. Unfortunately, no surface pottery or other diagnostic material which could confirm this was found on the upper site.

In June 1992, five 1 x 1 m units were excavated at the foot of the hill. Overall, most finds were concentrated in the upper 20 cm of deposits, and in no case were archaeological materials found deeper than 30 cm below ground level. Finds from these units consisted mostly of small sherds of undecorated pottery, plus a smaller sample of diagnostic sherds and some fragmentary pieces of weathered bone. Most of the decorated sherds were characterised by diagonal or herringbone incised or comb-stamped motifs, although a few sherds with cross-hatching were also recovered. Worked stone was rare, although a few pieces including a small end scraper were recovered from the surface and from a couple of the excavated units.

**Momare Kopjes - 45-C4-18:** This site covers an area of level ground, approximately 450 m in diameter. It is almost completely encircled by a series of granite outcrops or 'kopjes'. Surface features include dense scatters of pottery, abandoned saddle-quoerns and grinding stones, circular arrangements of small, upright stones marking former house sites, and the remains of at least one iron-smelting furnace with associated slag deposits.

Three units were excavated at this site in 1992. Two of these were 1 x 1 m test-pits; the other unit, which measured 2.20 x 1.15 m, was centered on an iron-smelting furnace. The test-pits and the areas around the furnace exterior were excavated in arbitrary 10 cm levels. The internal furnace deposits, on the other hand, were sectioned and excavated by natural layers. Pottery recovered from the surface and excavation units was mostly undecorated, and vessels forms represented in the assemblage were generally consistent with known 19th-20th century Tswana types. The decorated pieces were mostly incised or comb-stamped with diagonal or herringbone motifs. These, however, are rather uncharacteristic of historic Tswana pottery, and may be derived from an earlier occupation phase.

The furnace was of a simple-bowl type, roughly oval in shape measuring approximately 80 x 67 cm, containing almost 30 cm of mixed deposits of slag and medium coarse sand with a few traces of charcoal. At the base of the furnace two cone-shaped tuyère ends, showing signs of extensive vitrification, were found lying side by side.

45-C4-19: This site is situated a few hundred metres to the north-west of Momare Kopjes. It is characterised by a series of stone lines of varying length and orientation, covering an area of approximately 200 x 500 m. Each of the lines consists of a single layer of stones, tightly packed together and embedded in the ground. None of the lines is more than a few cm high and are rarely more than 0.5 - 1.5 m wide. The area is virtually devoid of vegetation other than aloes, and is cut by a number of erosion gullies. Surface artifacts are rare, comprising a few isolated pieces of worked stone, pottery or iron slag.

A single 1 x 1 m test unit was excavated adjacent to one of the stone lines. The extreme hardness of the soil made excavation difficult, even with frequent soaking of the ground, and the unit was abandoned after a depth of only 20 cm had been reached. No artifacts were recovered from the excavation and the nature and function of the stone lines remain enigmatic.

45-C4-20: Surface features at this site consist of rather diffuse scatters of pottery and iron slag, spread over a c. 50 x 50 m area. This material was originally thought to be associated with the

complex of stone lines (45-C4-19) situated some 400 m away to the north. A single 1 x 1 m unit was excavated here with this in mind.

Archaeological deposits extended to a depth of roughly 60 cm. A few pieces of daub, slag and highly decomposed bone were found below this up to a depth of 90 cm. These lower levels, however, had been extensively disturbed by termite activity. Three distinct layers of deposits were visible in profile, comprising an upper horizon of coarse, sandy soil; an underlying, thicker deposit of finer sandy soil with charcoal and ashy patches; and a basal deposit of very compacted sand.

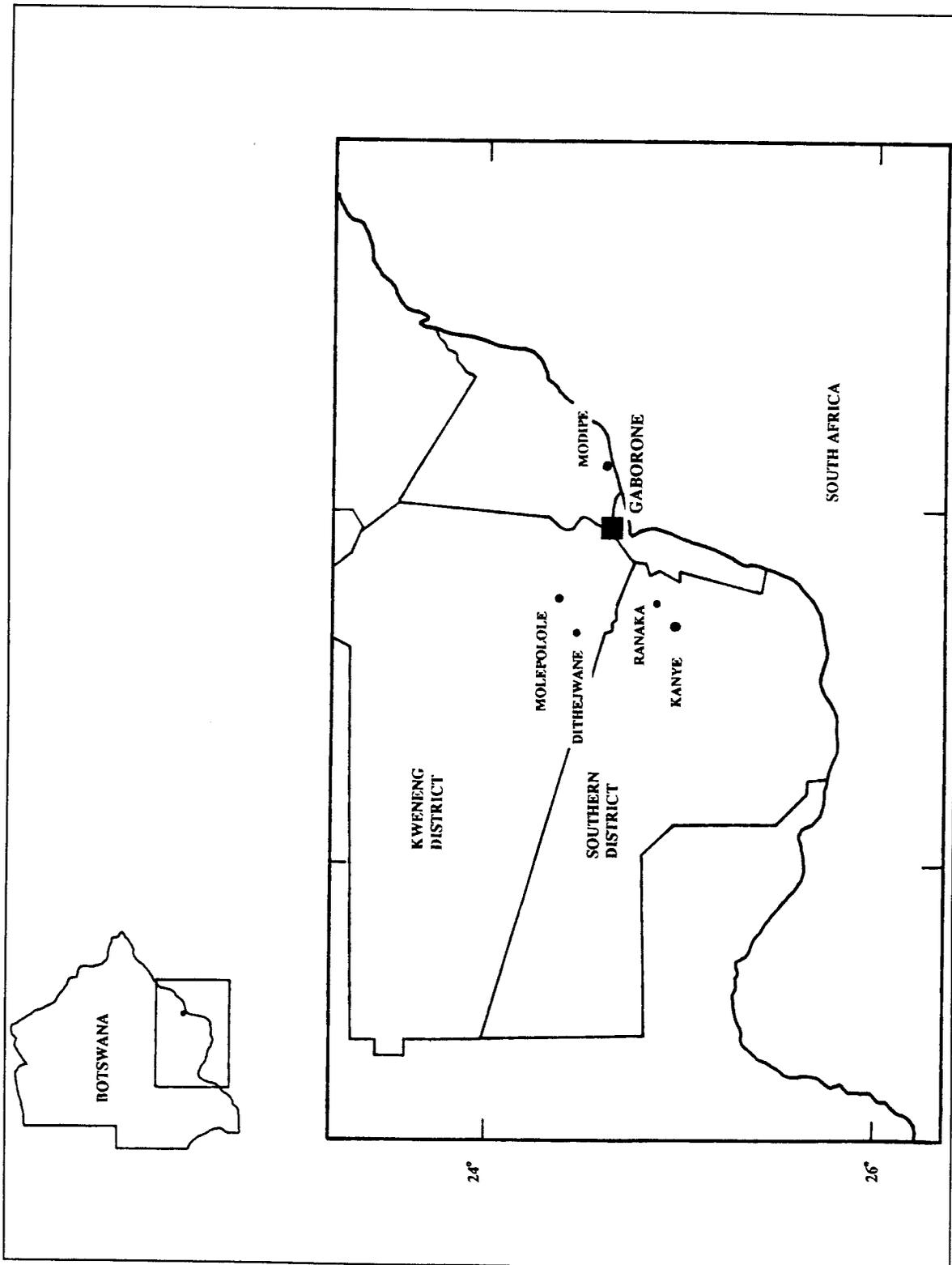
Most of the finds in the upper horizon consisted of small lumps of iron slag; no tuyères, however, were recovered. In layers 2 and 3, on the other hand, there was a decline in the amount of slag and a corresponding rise in the density of pottery and animal bone (most of which was very fragmentary). The diagnostic pottery consists of mostly body sherds decorated with bands of dense herringbone combstamping, that are often bordered by a single horizontal line of zig-zag impressions. Carbon-14 assays on charcoal from Levels 4 and 5 suggest a date for the site from ca. 1020-1250 A.D. (see Table 3).

Kwowe Hill - 45-C4-22: This site is situated on gently sloping ground at the foot of Kwowe Hill on its eastern side. A light scatter of pottery covering an area of c. 300 x 100 m was noted here during survey. The pottery was associated with a roughly circular patch of white ashy soil, which could represent the remains of a midden or cattle kraal.

Two 1 x 1 m units were excavated at the site in the areas of ashy soil. The archaeological deposits in these were no more than 30-40 cm deep, and in both cases overlay weathered bedrock. In Unit 2, over one hundred sherds were recovered from the top 10 cm of deposits, whereas in Unit 1 less than 20 artifacts in total were recovered from the same horizon. The sample of diagnostic sherds recovered from the site was small. These included a number of elements not found at other sites, such as the use of single lines of punctates and finger-nail impressions.

45-C4-32: A single, semi-circular, low stone wall standing to a height of roughly 0.40 m forms the main feature of this site. Another possible stone-walled structure, now reduced to rubble was

Figure 1: Kanye and Ranaka location map.



observed nearby. Other than a solitary rim-*sherd* with herringbone incisions, no artifacts were found on the surface around either of these. A 1 x 1 m unit was excavated near the rear of the extant example with the hope of recovering dateable materials and an indication of its function. The unit was excavated to a depth of 45 cm, when bedrock was reached. The only artifacts recovered were two possible chert flakes, which came from the upper deposits.

45-C4-33: This site is characterised by an extensive, light scatter of pottery associated with the remains of a few circular hut bases, an ash-midden and a stone granary base. One of the hut bases and the granary base were half-sectioned, and the profiles drawn. Very few remains were recovered from either context. In addition, a single 1 x 1 m unit was excavated. This was centred over the ash-midden. A large quantity of undecorated body sherds, and six undecorated rim sherds (all from vertical-sided jars) were recovered. Other finds included a copper ear-ring, pieces of iron cauldron, iron nails, and a number of fragmentary bones.

On the basis of these finds, the site probably represents the former settlement of a group of BaKhurutse who arrived from Tonota in north-east Botswana, near the turn of the century. They settled initially 'near the Mmatialo River', which lies close to the site. The group latter moved to Ranaka where they established the Telekelo ward, which was the last ward to be formed in the village (Mbakile 1995:19).

45-C4-37: The site is situated at the base of a small outlying ridge that is joined to the main Polokwe escarpment by a low saddle of land. The latter contains a number of stone-walled enclosures and other features, which may have been occupied contemporaneously with the lower site. For the time being, however, the enclosure complex has been treated as a separate site (45-C4-36).

The lower site lacks stone walling. Instead, it consists of a dense and extensive scatter of pottery, with a few scatters of slag. No traces of smelting furnaces or tuyères were observed. Three 1 x 1 m units were excavated here. Unit 1 was situated over a dense slag scatter, and excavated to a depth of 0.7 m. Most of the slag was concentrated in the upper 20 cm of the deposits,

and consisted of either small lumps, some with traces of flow lines, or droplets. As well as pottery, a large number of mostly undiagnostic bone fragments, some of which had clearly been burned, were recovered from these same horizons. Thereafter, the density of finds declined rapidly with depth and no cultural material was recovered below 0.5 m.

Unit 2 was located over an ash midden, which proved to be ca. 1.05 m deep comprising several distinct layers of deposits. As in Unit 1, most of the cultural material was recovered from the upper 30 cm of deposits. This comprised mostly pottery, with a smaller sample of fragmentary animal bone and a single ostrich egg-shell bead. Bone and pottery were recovered below this in much smaller quantities until bedrock was reached. A further three ostrich egg-shell beads were also recovered from these lower levels. Radiocarbon determinations on charcoal samples from Levels 6 and 8 suggest the site was occupied between ca. AD 1290 and AD 1640. An AMS date on charcoal from Level 10 of the same unit, however, provided a somewhat younger date (Table 3).

Unit 3, which was located ca. 20 m to the west of Unit 2, was excavated to a depth of 0.65 m. Virtually all of the cultural material recovered consisted of fragmentary pieces of pottery, about 80% of which was concentrated in the top 10 cm of deposits. Diagnostic material from all three units as well as the surface was broadly similar. As at sites 45-C4-16, 45-D3-16 and 45-D3-19, the principle decorative motifs consisted of bands of diagonal or herringbone combstamping or incisions. In terms of rim stance, both vertical and slightly everted forms are present in roughly equal numbers. Of the reconstructable vessel forms, bowls are more widely represented than jars; the sample, however, is small.

45-D3-16: Located ca. 2 km to the east of Ranaka, at the foot of a steep, and in places near vertical rock-face this is probably the largest of all the Iron Age sites found during the 1992 season. It was also one of the few that occurs within an area of contemporary cultivation - a factor which undoubtedly helped with the definition of its extent. The site stretches for roughly 1 km east-west along the foot of the escarpment, and extends for almost 2 km from north to south. Surface remains include pottery, slag, and "daga" (house-daub) scatters, sometimes located within a grey,

**Table 1:** List of sites located in the Ranaka environs, May-July 1992.

<u>Site</u>	<u>Latitude S.</u>	<u>Longitude E.</u>	<u>Topography</u>	<u>Type</u>	<u>Period/Date</u>
45-C4-15	24°56'12"	25°24'30"	Kopje	Stone walls & pottery & slag scatter	LIA
45-C4-16	24°56'24"	25°24'10"	Hill terrace & base	stone walled enclosures & pottery scatter	LIA
45-C4-17	24°56'07"	25°25'43"	River channel margins	lithic scatter	ESA
45-C4-18	24°55'13"	25°27'16"	Kopje	Hut foundations, furnace bases & artifact scatters	Historic
45-C4-19	24°55'56"	25°26'56"	Plains	Stone lines	?Historic
45-C4-20	24°55'08"	25°26'40"	Plains	Pottery & slag scatter	11-13th C.A.D.
45-C4-21	24°57'31"	25°26'19"	Hill base	Pottery scatter & stone structure	IA
45-C4-22	24°58'08"	25°26'35"	Hill base	Artifact scatter	IA
45-C4-23	24°58'13"	25°26'46"	Hill base	Pottery scatter & ?granary bases	IA
45-C4-24	24°58'41"	25°27'26"	Plains	Pottery scatter	EIA
45-C4-25	24°53'31"	25°23'00"	Hill base	Artifact scatter & granary bases	LIA
45-C4-26	24°59'04"	25°26'04"	Foothills	Daga & pottery scatter	Historic
45-C4-27	24°59'28"	25°27'25"	Hill base	Pottery scatter & ?granary bases	IA
45-C4-28	24°59'37"	25°27'19"	Hillside	Lithic scatter	MSA
45-C4-29	24°54'38"	25°28'40"	Lower hillslope	Artifact scatter	IA
45-C4-30	24°55'13"	25°25'00"	Hill base	Pottery scatter	?Historic
45-C4-31	24°55'06"	25°25'12"	Spur	Stone walled enclosures	IA
45-C4-32	24°55'16"	25°25'11"	Hill base	Stone walls	IA
45-C4-33	24°55'14"	25°25'21"	Lower hill slope	Hut foundations, granary base & artifact scatter	Historic (19th C.A.D.)

<u>Site</u>	<u>Latitude S.</u>	<u>Longitude E.</u>	<u>Topography</u>	<u>Type</u>	<u>Period/Date</u>
45-C4-34	24°55'17"	25°25'14"	Spur	Furnace base & slag & pottery scatter	IA
45-C4-35	24°54'55"	25°25'21"	Hill base	Stone walls & slag scatter	IA
45-C4-36	24°54'28"	25°26'00"	Ridge	Stone walled enclosures	LIA
45-C4-37	24°54'54"	25°26'10"	Hill base	Pottery & slag scatter	15-16th C A.D.
45-C4-38	24°55'05"	25°25'29"	Stream channel	Lithic scatter	MSA
45-C4-39	24°54'29"	25°27'49"	Hill base	Stone walled enclosures	LIA
45-C4-40	24°51'54"	25°24'46"	Plain	Hut foundations & slag & pottery scatter	LIA
45-C4-41	24°51'14"	25°27'51"	Hill base	Hut foundations, slag, tuyère & pottery scatter	LIA
45-C4-42	24°47'12"	25°28'44"	Hill base	Stone walls, pottery, grinding stone & slag scatter	LIA
45-C4-43	24°55'34"	25°24'35"	Lower hill slope	Pottery scatter	LIA
45-C4-45	24°54'44"	25°25'53"	Plateau	D-shaped enclosure	LIA
45-C4-46	24°54'52"	25°26'48"	Hill base	U-shaped enclosure	LIA
45-C4-47	24°54'45"	25°26'25"	Hill base	Furnaces & slag scatter	IA
45-D3-16	24°54'56"	25°30'17"	Hillslope	Pottery & daga scatter, ash middens	16-17th C A.D.
45-D3-17	24°55'26"	25°31'11"	Hill base	Pottery scatter & stone wall terracing	LIA
45-D3-18	24°55'05"	25°33'07"	Hill base	Furnace bases, slag scatter & settlement remains & lithic scatter	IA & MSA
45-D3-19	24°55'18"	25°33'53"	Hill base	Rectangular stone walled enclosures	Historic
45-D3-20	24°53'22"	25°32'16"	Plain	Pottery scatter	IA

**Table 2:** Location of sites in the Kanye Environs.

<u>Site</u>	<u>Latitude S.</u>	<u>Longitude E.</u>	<u>Topography</u>	<u>Type</u>	<u>Period/Date</u>
55-A2-06	25°00'44"	25°21'44"	Hillside	Stone walls	IA/Historic
55-A2-09	25°01'00"	25°23'20"	Erosion gully	Lithic scatter	ESA/MSA
55-A2-10	25°01'10"	25°23'22"	Erosion gully & adjacent plain	Pottery scatter & stone clusters	EIA

**Table 3:** Radiocarbon Dates

<u>Site No.</u>	<u>Lab No.</u>	<u>Context</u>	<u>Radiocarbon Years B.P.</u>	<u>Calibrated Date(s) A.D.</u>	<u>Intercept(s)</u>
45-C4-20	Beta-59368	Unit 2 Level 4	790 ± 80	1030 - 1375	A.D. 1252
	Beta-59369	Unit 2 Level 5	990 ± 80	890 - 1220	A.D. 1021
45-C4-37	Beta-59370	Unit 2 Level 6	480 ± 80	1290 - 1640	A.D. 1431
	Beta-59371	Unit 2 Level 8	510 ± 80	1290 - 1510	A.D. 1418
	Beta-59372 CAMS-12946	Unit 2 Level 10	390 ± 60	1440 - 1660	A.D. 1510, A.D. 1590 & A.D. 1620
45-D3-16	Beta-71839	Unit 1 Layer 2	390 ± 60	1440 - 1660	A.D. 1510, A.D. 1590 & A.D. 1620
	Beta-71841	Unit 2 Layer 5	710 ± 70	1240 - 1420	A.D. 1300

ashy soil matrix which probably represent ploughed-out middens.

Excavations were restricted to an area near the centre of the site close to the lower slopes of the escarpment. Three units were excavated; these measured 5 x 5 m (Unit 1), 3 x 3 m (Unit 2) and 1 x 1 m (Unit 3). Unit 1 was located over a dense surface concentration of "daga" and pottery. As suspected, these marked the location of a collapsed structure and buried floor. Finds included fragmentary animal bone, slag, specularite and ostrich-egg and other types of shell beads plus a large quantity of pottery. In terms of its diagnostic elements, the latter assemblage is broadly similar to that from 45-C4-37, although the use of diagonal incisions is rather more common than combstamping. In addition, a wide range of other decorative techniques appear to have been employed, including horizontal incised lines, cross-hatching and graphite and/or red iron oxide mineral surfacing. A single radiocarbon date based on charcoal from below the bulk of the collapsed "daga" structure, would suggest that this part of the site was occupied between ca. 1450-1650 A.D. (Table 3).

Unit 2 was located ca. 45 m to the south-west of Unit 1, over a rather diffuse patch of ashy soil, artifacts and faunal remains. Excavation revealed a sequence of partially interleaved deposits consistent with interpretation of the feature as a shallow midden (ca. 0.25 m deep). As in Unit 1, beads, pieces of butchered bone, occasional lumps of slag and pottery constituted the principle cultural materials recovered from the unit. Unit 3 was located even further away (ca. 55 m) and downslope from Unit 1. It was excavated in natural layers to a depth of 0.70 m, at which point sterile subsoil had been reached. Most of the finds were concentrated in the upper 30 cm of deposits, although a radiocarbon determination on charcoal from a depth of c. 50 cm and associated with pottery (undecorated) suggests that there may have been an earlier phase of occupation in the 13th-14th century A.D. (see Table 3).

Lefawa - 45-D3-19: The main surface characteristics of this site are an extensive pottery scatter of variable density, traces of collapsed "daga" structures, a series of stone-walled terraces and at least two separate clusters of iron smelting remains. These features overlap with one another, and are all located at the very foot of the southern

escarpment of the Polokwe Hills, toward its eastern end. In extent, the site measures approximately 1.2 x 0.5 km. A light scatter of MSA lithics was also encountered in the same area as the main cluster of iron-smelting furnaces.

Excavation focused on a complex of twenty smelting furnaces and/or forges concentrated in a 20 x 30 m area. Most of these are badly eroded such that only the bases now survive. Six, however, were sufficiently well-preserved to allow reconstruction of their original form. Three of these were of simple-bowl type, one consisted of a Melville Koppies type (*pace* Friede and Steel 1985) of low-shaft furnace, and the remaining two were linked together to form a figure-of-eight arrangement (see Mokobi 1995:24-29). This type does not appear to have been previously encountered within the southern Botswana - northern Transvaal region. A plan of the entire area was drawn, showing the location of the different furnace bases and the surrounding slag concentrations. The area was also gridded into 5 m<sup>2</sup>, which were then used as collection units for all surface pottery, tuyère fragments and lithics (principally of MSA type), but not slag.

The figure-of-eight furnace and one of the bowl furnaces were excavated, and their profiles drawn. The deposits in both examples consisted of small lumps and droplets of slag and a few charcoal flecks in a matrix of sandy soil. No tuyère fragments were recovered from either excavation. There was also insufficient charcoal for radiocarbon dating.

Three other units were also excavated at the site. Units 2 and 3 were located toward the eastern end of the main pottery scatter, and measured 2 x 2 m and 1 x 1 m, respectively. As at most of the other sites, the uppermost deposits (c. 20-30 cm) contained the bulk of the cultural materials. Unit 4, measuring 2 x 2 m, was excavated approximately 100 m to the west of the main complex of iron-smelting remains. The finds and deposits from this closely resembled those from the other two units. In none of these cases were any features or structural remains encountered. There was also a total lack of any charcoal or other material suitable for radiocarbon dating. The diagnostic pottery from the site was similar to that from site 45-C4-37, which would imply a 15th-17th century date.

## Discussion

The most obvious achievement of the 1992 season was the location and documentation of 40 previously unrecorded archaeological sites in the areas around Ranaka and Kanye. These range in date from the Early-Middle Stone Age transition up to the first few years of the 20th century. The limited number of sites located south of Kanye must be seen as due to the restricted nature of the survey here, rather than evidence of a real distribution. Even so, two important sites were found in approximately the same locality. One of these can be assigned to the later EIA, and from the sample of diagnostic pottery collected is likely to belong to the Eiland facies. The other site can best be described as an extensive ESA/MSA transition complex. Open sites of this nature are especially prone to re-sorting (Cahen and Moeyersons 1977), and the Mokape Gullies complex is no exception. Nevertheless, the presence of apparent knapping scatters in several areas implies that at least some in situ deposits warranting further investigation have survived.

In the Ranaka environs, where the survey was more comprehensive, the density of sites is quite high. Most of these are of Iron Age date. On typological grounds the ceramics from these sites suggest a degree of cultural continuity between the later phases of the Early Iron Age and the Later Iron Age. Thus, for instance, pottery from excavations of the 14th century EIA site at Broadhurst, now part of Gaborone, exhibit a similar range of decorative motifs and techniques of decoration (Denbow 1981). However, there are some differences between this assemblage and the pottery from sites around Ranaka. These include a higher percentage of thickened rims in the Broadhurst assemblage, and a corresponding greater proportion of necked jars relative to open bowls. Since most of the diagnostics from the Ranaka sites are fragmentary, making it difficult to reconstruct vessel forms, the latter difference may be artificial. The variations in rim shape, on the other hand, may have greater significance.

Specifically, two broad ceramic traditions are believed to have existed in southern Botswana during the first half of the second millennium A.D. Both are thought to have had their origins further east, in what are now different regions of South Africa. The earliest of these, known as Eiland

ware probably emerged around the 10th century A.D. in the Phalaborwa area of eastern Transvaal, and begins to appear in southern Botswana from the 11th century (Evers 1983). In some parts of Botswana the tradition appears to continue until the 17th-18th century, and its spread may have been linked to the dispersal of BaKgalagadi peoples throughout the Kalahari (Campbell et al. 1991). Diagnostic features of the style include the use of alternately hatched chevrons and arcades, and multiple bands of incised or combstamped diagonal or herringbone motifs (Denbow 1981; Evers 1983; Klapwick and Evers 1987; van Waarden 1992). Thickened rims, and grooved or nicked lips are also common.

Around the mid-12th century A.D. in neighbouring areas of South Africa, this style is generally superceded by a different ceramic tradition known as Moloko ware. The main diagnostic feature of this is the greater use of colour, and particularly bands of graphite or ochre burnish. These are frequently separated by a variety of hatched, incised or stamped triangular or arcaded motifs, particularly during the earlier phases of the tradition. Necked, constricted and hemispherical vessel forms are common and rims tend to be simple (Evers 1983; van Waarden 1992; Boeyens 1995). Moreover, because of its stylistic similarities with pottery made during the historic period, Moloko ware is generally associated with the appearance of the first groups of Sotho-Tswana speakers in the region.

Dates from recently excavated sites in southern Botswana indicate its presence by the late 13th century A.D. (Campbell et al. 1991). However, unlike the situation further south and east, Eiland elements also occur at many of these sites, in the form of both separate vessels and as separate attributes on the same vessel. As well as the Broadhurst site excavated by Denbow (1991), other sites include several to the north of the Polokwe Hills located by van Waarden along the route of the new Kanye-Gaborone road (1987, 1992). A similar trend is also evident in the material from Ranaka where the majority of Iron Age sites contain a combination of Eiland and Moloko elements, including sites 45-C4-37 and 45-D3-16 both of which were probably occupied during the mid-15th to mid-17th century.

If it is accepted that the Eiland and Moloko ceramic traditions correspond with two distinct

cultural traditions (tentatively ancestral BaKgalagadi and Tswana, respectively), then the co-occurrence of the styles at the same sites has a number of potential implications, which as yet are poorly understood. The existence of pottery exchange networks between the different communities may have accounted for some of this patterning, and a program of provenancing studies along the lines recently applied in the Soutpansberg region of South Africa (Jacobson et al. 1991), could help to resolve this. Alternatively, the two communities may have co-existed within the same settlement, as is known to have been the case in the more recent past. In this regard, it is notable that the settlement layout and distribution of pottery styles at the 15th-17th century Moloko tradition site at Modipe Hill, which lies approximately 100 km north-east of Ranaka, could be interpreted along these lines (Pearson 1995).

Alternatively, the Ranaka material could be regarded as a single style with localised variants, representative of strong cultural continuity well into the LIA at least until the appearance of classic Tswana-type pottery. Such an interpretation is at odds with the majority of oral traditions concerning the history of Tswana settlement on the eastern hardveld. However, it must be borne in mind that BaNgwaketse, who are the dominant group in the area today, only consolidated their overrule of the area towards the end of the 19th century and the development of typically Tswana pottery may coincide with this process of political consolidation.

All three issues will be considered during the next phase of research, partly through a further program of fieldwork and partly through the initiation of various analytical studies. Complementary oral historical research may also prove to be of value. Two other issues which will also have to be addressed are the causes of the variations in the spatial layout of the stone-walled complexes, and their chronological significance. In neighbouring areas, such as the Marico Valley, the use of stone for building is considered to be a later, ca. 17th century development of the Moloko tradition, which also corresponds with a shift in settlement locations (Boeyens 1995). Although a similar development has been assumed for southern Botswana, the lack of any reliably dated stone-walled complexes other than those at Modipe, precludes any definitive statement on this

issue. For this reason, the detailed mapping and area excavation of a sample of stone-walled sites around Ranaka will form a major component of the next field season.

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