



DIVING INTO THE COLLECTIONS: ANALYSING TWO EXCAVATED SOTHO-TSWANA COMPOUNDS IN THE SUIKERBOSRAND, GAUTENG PROVINCE

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ABSTRACT

In this article, we set out to publish the results of extensive excavations conducted in the late 1980s and early 1990s by staff and students of the Archaeology Department, University of the Witwatersrand, at two Late Iron Age stone-walled compounds in the western foothills of the Suikerbosrand massif, near Johannesburg. While these two compounds, Sun Shadow and Boschoek, have been extensively cited in the literature, their data have never been published. Here, we analyse the distribution of their collected artefacts, in conjunction with their field maps, to better understand the spatial organisation of these two Molokwane-style stone-walled compounds. We were also interested to assess the merits of revisiting under-analysed archaeological materials housed in the University of the Witwatersrand's collections. The results revealed frustrating gaps and shortcomings in the collections, but also shed new light on the social organisation of these settlements. Overall, we feel that the exercise was worthwhile and we encourage similar such studies in the future, allowing researchers to explore the scientific potential of the masses of buried treasure within the university's collections.

Keywords: Late Iron Age, stone-walled structures, Batswana settlement organisation, spatial analysis, ethnographic analogy

1. Introduction

Bantu-speaking farming and herding communities first colonised the Highveld grasslands around AD 1600, and in a short time left behind thousands of stone-walled ruins (Huffman 2007; Sadr 2020). In the past 30 years, research has focused on linking these stone-walled ruins to ethnographically known cultural groups, and explaining their social, political and economic organisation, as well as their regional interactions (e.g., Maggs 1976a, b; Taylor 1979; Loubser 1985; Huffman 1986, 2007; Mason 1986; Lane 1998; Pistorius 1992, 1994, 1996, 1997; Hall 1998; Boeyens 2000, 2003; Huffman et al. 2007; Fredriksen 2007; Anderson 2009; Boeyens & Hall 2009). Here, we focus on two stone-walled compounds in the western foothills of the Suikerbosrand massif, which were designated as Sun Shadow and Boschoek by their excavators (Taylor 1984; Huffman 1986; Hodgson 2019, 2021).

In 1984, a brief report and a map of Sun Shadow was published by Mike Taylor. Two years later, in 1986, the area of the largest lobe or scallop in the perimeter wall of Sun Shadow was excavated by three University of the Witwatersrand (Wits) archaeology honours students, namely Kaplan (1986), Sales (1986), and de Wet (1987). In the same year, Tom Huffman published the first map of the neighbouring Boschoek compound, calling it the east unit at Boschoek (Huffman 1986, 1988). Sun Shadow and Boschoek were both excavated again over five seasons by Wits archaeology undergraduates, between 1991 and 1994. Boschoek was excavated more extensively than Sun Shadow, but few details of the excavations, or the finds from either compound, were published.

Sun Shadow and Boschoek are part of a cluster of stone-walled ruins – a neighbourhood – situated around a rocky ridge approximately 300 m west of the Suikerbosrand Nature Reserve boundary fence (Fig. 1), at the southern edge of the farm Blesboklaagte 181 IR. Today, the two compounds are covered in *Vachellia tortilis* trees, which hide many of the stone walls. Architecturally, both compounds were

built in the Molokwane style, and their ceramics are of the Buispoort facies (Huffman 2007). It is widely agreed that Batswana constructed stone-walled compounds in the Molokwane style and Huffman (2007) specifically attributes this architectural style to the precolonial Bakwena and Bahurutshe polities.

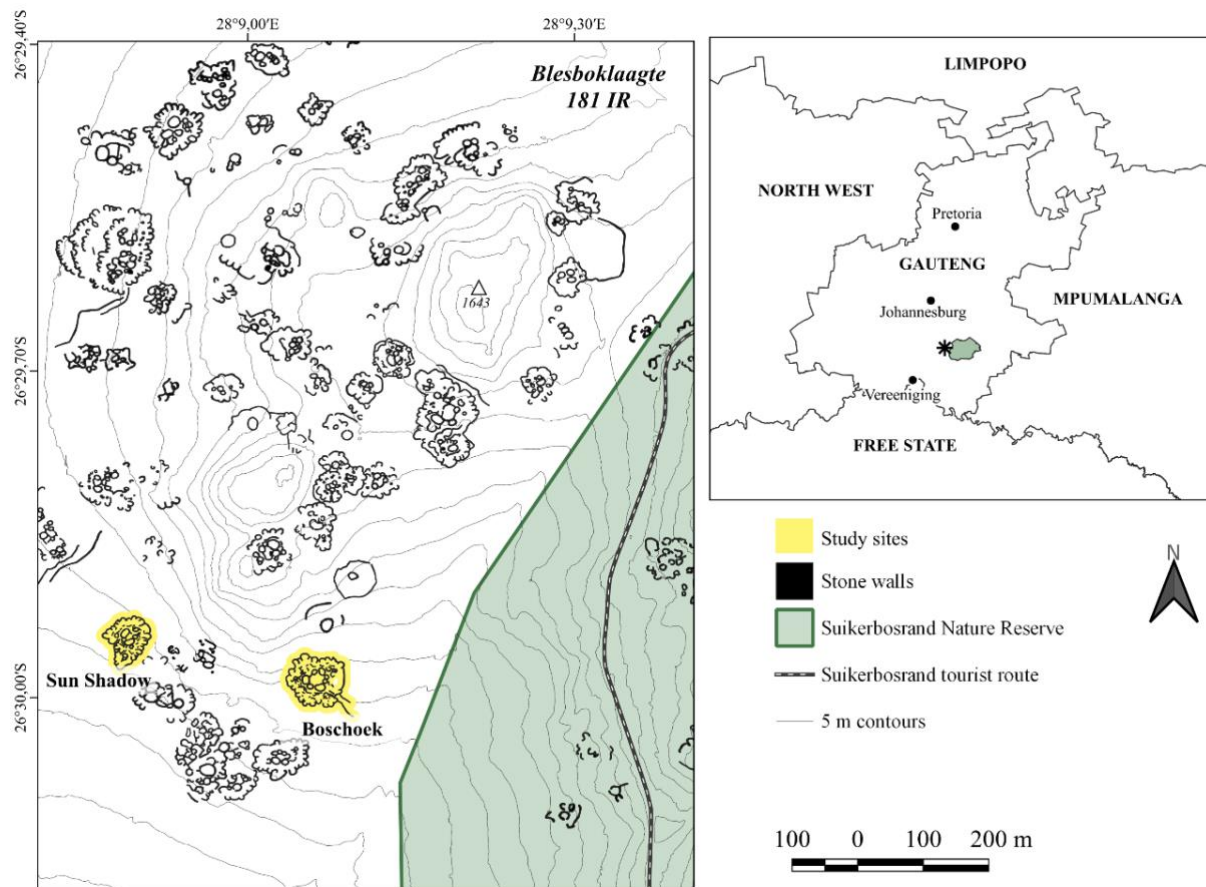


Figure 1. The locations of Sun Shadow and Boschoek (yellow highlight) in relation to the other compounds in the neighbourhood, and to the Suikerbosrand Nature Reserve (green) in the Gauteng Province, South Africa.

Both compounds have a scalloped perimeter wall, with a few openings into the residential zone which surrounded the central livestock pens (Fig. 2). Each scallop in the perimeter seems to have formed the back-courtyard wall of a cone-on-cylinder, mud-walled and thatch-roofed house. In the front courtyards, there are various stone-walled features, including windbreaks for cooking areas, various low stone alignments which served as partitions and demarcations for routes, and at Sun Shadow some corbelled stone huts occur that may have served as shelters for herd boys (Huffman 2007). The corbelled stone huts are characteristic of the Type V style of architecture found predominantly to the east and south of the Suikerbosrand area. Their presence at Kweneng, a major Sotho-Tswana settlement that was destroyed two hundred years ago during the *Difeqane* civil wars (Sadr 2019), within Molokwane-style compounds fortifies the conclusion that this site was a multi-cultural settlement (Sadr 2022). In the central zone of each compound, there are a collection of linked stone-walled circles that served as pens for large and small livestock. There are several stone towers built into the outer walls of these pens, which may have served as elevated platforms for grain storage structures (Taylor 1984; Huffman 1986; Sadr 2022).

Sun Shadow and Boschoek fall within the footprint of Kweneng. It appears that the occupants left their belongings and hastily abandoned the settlement, never to return. The distribution of objects at these two excavated compounds, therefore, provides us with a snapshot of the daily activity at a Late Iron Age settlement on the Highveld. Although it is only one snapshot – and many consecutive snapshots over a longer period would be required to do justice to the topic – we ask what can the distributions of all these objects tell us about the social organisation of space within these compounds? A spatial

analysis of the stone-walled features at two unexcavated compounds in Kweneng – Fern’s compound and the Pitted compound (Sadr & Mshuqwana 2020; Sadr 2021) – recently provided useful information on this topic, but at Boschoek and Sun Shadow, we have the added benefit of a wealth of excavated artefacts and features to provide more context and resolution.

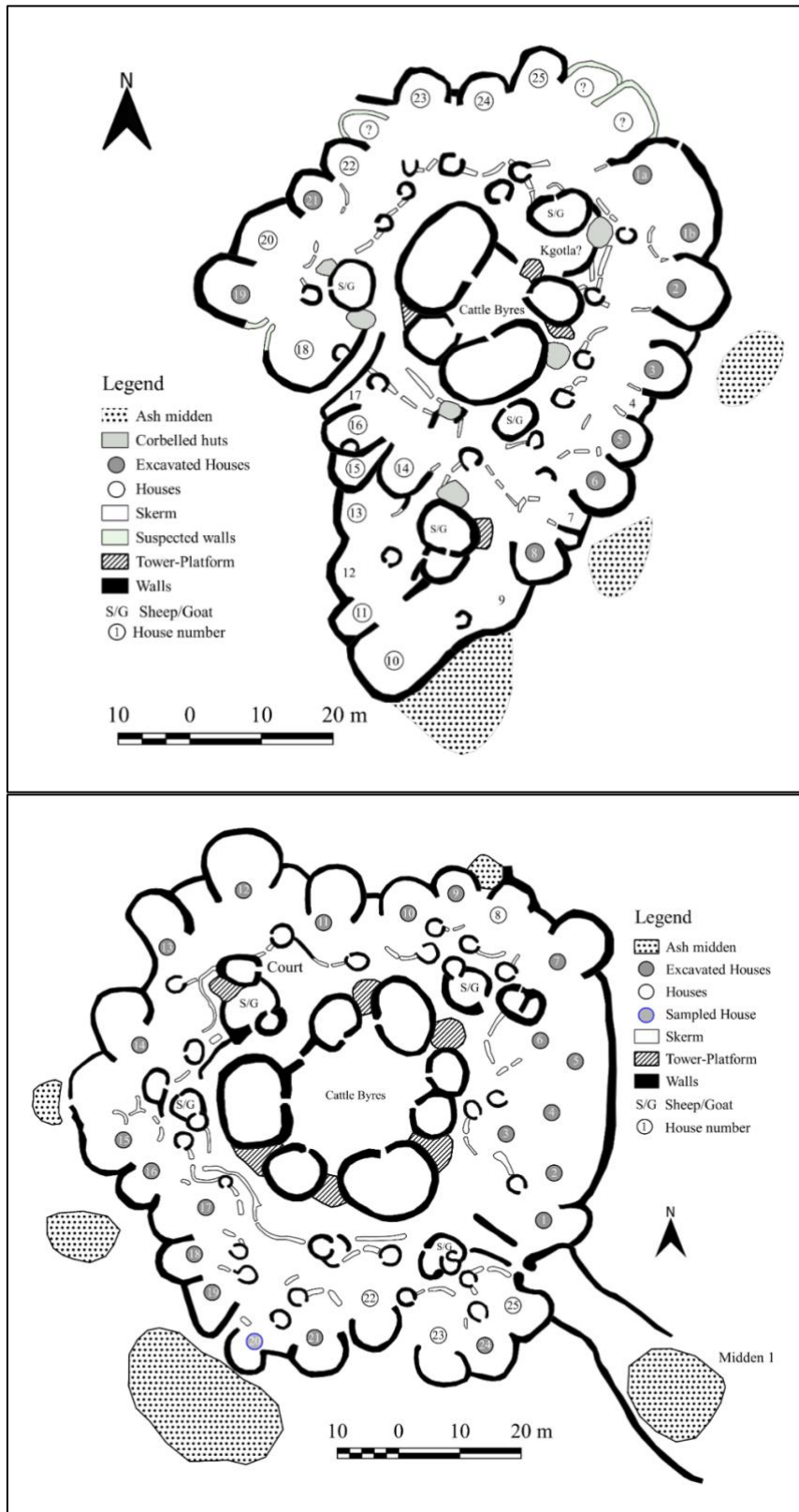


Figure 2. Sun Shadow (top map) showing the excavated houses (adapted from Taylor 1984 and Kaplan 1986); Boschoek (bottom map) showing the excavated houses (adapted from Huffman 1986, 2007).

The rationale for this project is to improve our understanding of the social organisation of space in the Late Iron Age compounds of Kweneng, and to see how these might correspond with the more recent ethnographically-known spatial organisation of Batswana wards. Furthermore, we wanted to assess the feasibility of examining under-analysed archaeological collections stored at Wits, and by doing so, to heed the (largely ignored) call to arms published long ago by Jannie Loubser (1990) and Aron Mazel (1991); who pointed out that it is the responsibility of archaeologists to make our findings available not only for outside scrutiny within the scientific community but also to the wider South African public, who have a vested interest in, and the right to view, work undertaken in their communities. Our exercise was partially successful, and we begin with a short description of the methods and materials used in our study.

2. Methods and materials

The materials used in this study comprise the artefacts excavated from both Sun Shadow (2628CA1/a) and Boschoek (2628CA1/c) (Fig. 2); several methods were employed in this project. First, all the excavation logs and maps relating to Sun Shadow and Boschoek were digitised for GIS mapping. QGIS (QGIS Development Team 2020) was used to create maps for each excavated house in the two compounds. Kaplan's (1986) map of Sun Shadow and Huffman's (2007) map of Boschoek were geo-referenced, as were available field maps of house excavations. Thereafter, all the artefacts from the two sites were recorded and classified. Photographs were taken of all metal objects and pottery, as well as any other unusual items. Information on the distribution of the artefacts was stored in Microsoft Excel spreadsheets and GIS data sets. Finally, the spatial distribution of artefacts was analysed.

The main limitation of this study was the bias towards house excavations and the inconsistent quality of excavation maps and field notes. From Boschoek, a few of the house excavation maps were missing, as were excavation notes for houses B3, B6, B7, B12, and B18. About half of the Boschoek excavation maps had no north arrows or other positioning information. The records from Sun Shadow were considerably more complete. None of the field notes mentioned a sieving process and, in the photographs taken at the time, there are no signs of any sieves. We assume therefore that some tiny artefacts were not collected. Furthermore, there were discrepancies in the amount of artefacts recorded in the field notes versus the actual quantities that were recorded during this research, particularly in the amount of potsherds, but there is no detailed information about the sampling strategy that determined which artefacts were kept and which were left behind. We will describe these gaps in more detail at the appropriate juncture. Finally, because of a lack of cooperation from the present landowner, it was not possible for us to revisit these sites. Thus, unusual differences between the maps of the two compounds, such as the presence of corbelled stone-huts at Sun Shadow and their absence at Boschoek, could not be confirmed.

3. Results

In total, just over 15 000 objects were recovered from both Sun Shadow and Boschoek (Table 1). About a third of these came from Sun Shadow. The remainder comes from Boschoek: a third from the excavation of the ash midden and the rest from the house excavations. On average, each house excavation at Sun Shadow produced about twice as many finds as the average house at Boschoek. This probably indicates that not all the excavated finds from Boschoek were collected. In addition, we did not count all the bone and charcoal in the Boschoek collection due to time constraints and the discovery of human remains in the midden material.

If we begin with the null hypothesis that each house in each compound should contain about the same amount and diversity of material remains, several interesting anomalies immediately become evident. For example, even though only about a third of the houses at Sun Shadow were excavated, these show an uneven distribution of finds with the house area of S1 containing nearly half of all the excavated finds from this compound. It should be noted that this area contained two mud-walled and thatch-roofed structures, and a considerable amount of material also came from the intervening space between these structures (Fig. 3). House S6 at Sun Shadow also contains an unusually large number of objects in comparison with the remaining excavated houses (Fig. 4a), although the excavated area here is rather small. At Sun Shadow, the houses with the largest number of excavated objects are on the right-hand

side of the compound; a pattern that is also repeated at Boschoek (Fig. 4b). Following the Central Cattle Pattern (CCP) principles for organising space in traditional settlements of southern Africa (Huffman 1986, 2001), the right-hand side of the compound should house the more senior members. The greater number of objects coming from the right-hand side of the two excavated compounds may reflect this seniority, but we cannot be certain because at Sun Shadow a few houses in the left-hand side were excavated, and in Boschoek an unknown quantity of material from some or all the house excavations was left behind in the field.

Table 1. All finds recovered from Sun Shadow (S) and Boschoek (B).

House	Fauna	Stone	Metal	Ceramic	Beads	Building material	Sum
S1	15	124	1	1806	2	418	2366
S2	48	5	1	460	-	1	515
S3	1	1	2	119	-	-	123
S5	7	11	-	345	-	10	373
S6	196	12	90	458	366	150	1272
S8	3	4	1	41	-	191	240
S19	29	22	9	115	-	-	175
S21	5	12	1	466	-	-	484
B1	22	8	4	534	-	-	568
B2	20	7	-	309	-	-	336
B3	67	2	-	185	-	1	255
B4	27	7	4	584	-	-	622
B5	5	8	2	257	-	-	272
B6	-	-	-	225	-	-	225
B7	63	-	3	1005	-	-	1071
B9	1	-	-	-	-	-	1
B10	1	8	-	262	-	-	271
B11	-	-	-	1	-	2	3
B12	-	-	-	69	-	2	71
B13	38	-	1	41	-	19	99
B14	24	1	-	96	-	-	121
B15	163	1	4	196	-	16	380
B16	67	6	1	486	-	1	561
B17	-	5	1	45	-	3	54
B18	312	9	1	87	-	-	409
B19	4	-	-	106	-	-	110
B20	-	-	-	-	-	-	0
B21	41	7	-	187	-	-	235
B24	109	17	1	198	-	3	328
BM1	47	1405	9	2051	10	6	3528
Sum	1315	1682	136	10734	378	823	15068

Nevertheless, at first glance, the distribution of objects seems to support the idea that in these two compounds, social seniority is reflected in the quantity of artefacts. A closer look at the more complete sample from Boschoek, however, reveals some important caveats. Although houses B1-B12 on the right-hand side of Boschoek contain about 3/5th of the excavated objects (not counting the midden excavation), the bulk of this material comes from houses B1-B7; indeed, the row of houses B9-B14 at the top-end of Boschoek, i.e., the highest status zone according to the CCP principle, curiously contain relatively few excavated objects (Fig. 4b). The distribution of artefacts thus hints at a more complex situation than merely a reflection of status.

A major issue that distorts our understanding of the spatial organisation at these two compounds is the bias towards house excavations. The artefact distributions at Boschoek and Sun Shadow reflect a frozen moment in time when the Matabele attacked and Kweneng was burnt down and abandoned forever (Sadr 2019). Considering the amount of material found outside the houses in area S1 of Sun Shadow, it appears the occupants were surprised by the impending attack during daylight hours when activities were taking place outdoors. This is based on the assumption that the front courtyard would be cleaned

in the evening and the pots, food remains, and stone tools would not be left out overnight. If that is the case, we must assume that the objects excavated from inside each house do not represent a complete catalogue of the belongings of that house’s occupants. If such activity was taking place in the courtyards at the hour of abandonment, then we are missing a large part of the evidence for reconstructing the social organisation of space at these two compounds. Future excavations in the open areas around the houses may provide a more complete view of the material wealth of each house. For now, all we can do is keep this caveat in mind when interpreting the data. Below, we describe and analyse the distribution of the different classes of finds excavated from these two compounds.

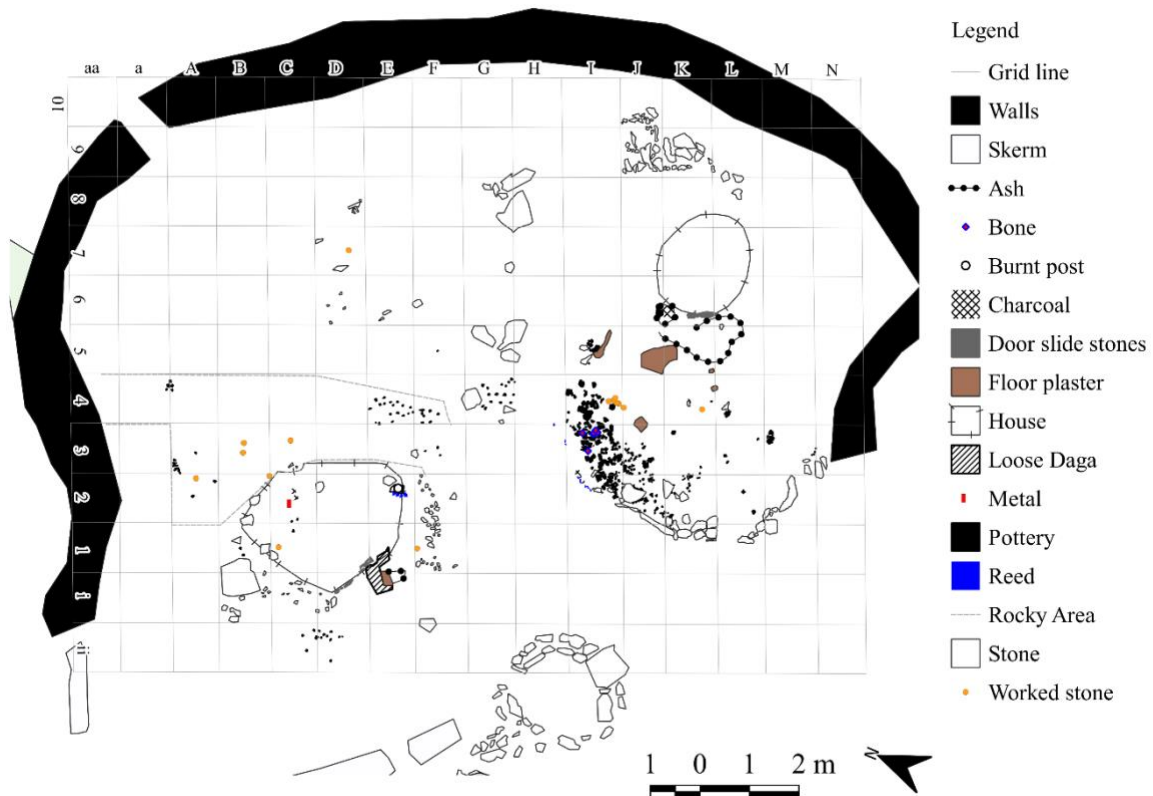


Figure 3. The excavation map of house area S1 at Sun Shadow (after Kaplan 1986, Sales 1986 and de Wet 1987).

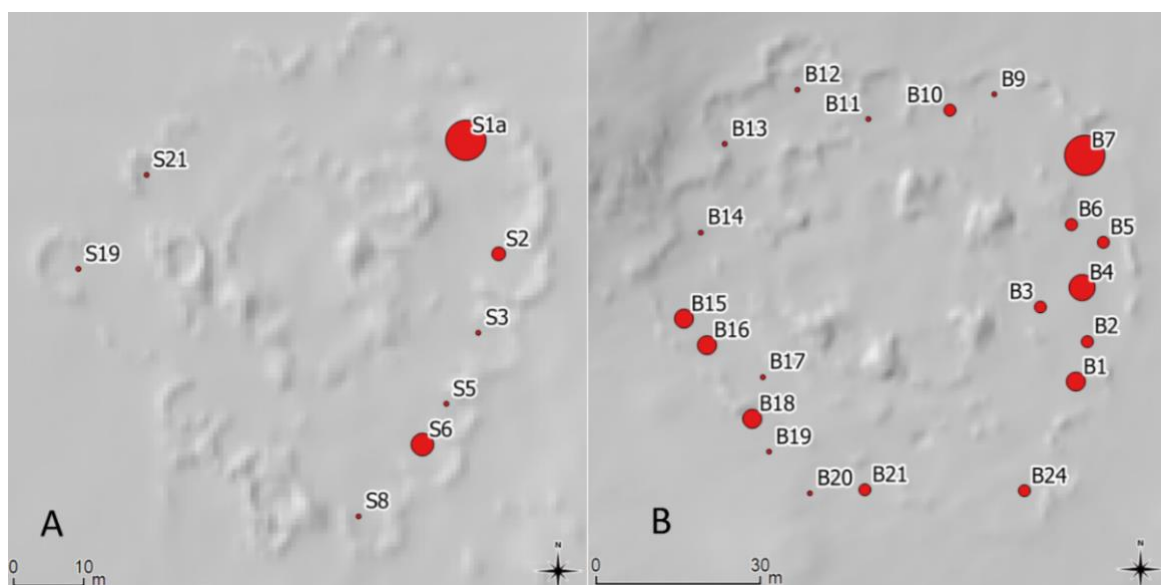


Figure 4. The distribution of all finds at Sun Shadow (a) and Boschoek (b). The size of the circle indicates the number of objects from each house excavation; see Table 1 for details.

Beads

There is a stark bias in the distribution of beads within and between these two compounds. At Sun Shadow only three of the eight excavated house areas contained beads. House S1, which is otherwise the richest in number of finds, contained only two ceramic beads, and house S2 contained a single ostrich eggshell bead. Surprisingly, house S6 revealed a mass of ceramic beads (n=294), copper beads (n=72) and ostrich eggshell beads (n=47). These were found tightly clustered together with other metal ornaments, and perhaps were originally all together in a bag, perhaps cached in the rafters. At Boschoek, ostrich eggshell fragments were found in four of the houses, but none are bead preforms. The excavation of the midden at Boschoek produced 10 ostrich eggshell beads.

Metal

We alluded to other metal ornaments in the cache from house S6 at Sun Shadow, and indeed this is the house that yielded most of the metal items from these two compounds (Table 2). Two copper earrings and a bundle of copper wire were part of the hoard, as well as several other metal artefacts, notably seven iron ingots as well as some tools and spearheads (Fig. 5a). It is noteworthy that following CCP guidelines, house S6 is not located in an area that might indicate a high-status occupant. One of the reviewers of this paper suggested that the presence of this hoard hints at economic independence, possible specialisation, and perhaps that it reflects a tension between CCP guidelines and self-realisation – the distance between rules and daily practice. In that case, this hoard has nothing to do with status, but speaks to the skill sets, regional social networks, and kin connections of the occupants of house S6, who may have obtained the copper wire, iron ingots and spear tangs for recycling and exchange. Of the other excavated houses at Sun Shadow, five have only one or two metal artefacts each, and most of these are spearheads. Two of the houses contained no metal: one on the left- and the other on the right-hand side of the compound (Fig. 6). In Sun Shadow house S8, there was a metal object with two holes punched through the middle (Fig. 5b).

Table 2. Metal objects recovered from Sun Shadow (S) and Boschoek (B).

House	Iron ingots/tangs/pins/rods	Axe/adze	Spearhead/point	Unidentified metal object	Iron slivers/flakes	Copper earring	Copper wire	Copper beads	Razor	Hoe	Modern pressed metal	Other	Sum
S1	-	-	-	-	1	-	-	-	-	-	-	-	1
S2	-	-	1	-	-	-	-	-	-	-	-	-	1
S3	-	-	2	-	-	-	-	-	-	-	-	-	2
S6	7	1	3	2	-	2	1	72	2	-	-	-	90
S8	-	-	-	-	-	-	-	-	-	-	-	1	1
S21	-	-	1	-	-	-	-	-	-	-	-	-	1
B1	2	-	2	-	-	-	-	-	-	-	-	-	4
B4	-	-	-	-	3	-	-	-	-	1	-	-	4
B5	-	-	2	-	-	-	-	-	-	-	-	-	2
B7	1	-	1	-	-	1	-	-	-	-	-	-	3
B13	-	1	-	-	-	-	-	-	-	-	-	-	1
B15	-	-	4	-	-	-	-	-	-	-	-	-	4
B16	-	1	-	-	-	-	-	-	-	-	-	-	1
B17	-	-	1	-	-	-	-	-	-	-	-	-	1
B18	-	-	-	1	-	-	-	-	-	-	-	-	1
B24	1	-	-	-	-	-	-	-	-	-	-	-	1
BM1	2	-	1	5	-	-	-	-	-	-	1	-	9
Sum	13	3	18	8	4	3	1	72	2	1	1	1	127

In Boschoek, only about half of the 21 excavated house areas contained metal artefacts, so if the sample is not biased, metals seem to have been more accessible to the inhabitants of Sun Shadow. The Boschoek sample comprises a single copper earring that came from house B7, with spearheads making up just

over half of all the metal artefacts in the collection. Most of the other iron artefacts here are ingots and unidentified bits of metal. Only one farming implement, a hoe, was found, although the two axes/adzes could also have been used in agricultural or other maintenance activities. The rarity of hoes in the compounds may mean that such tools were kept in field huts rather than in the main settlement, or that iron was too rare to use for such tools as suggested by Maggs (1976a). Indeed, most agricultural/maintenance tools may have been in use outside the houses when the site was attacked and so would not be encountered in the excavations. An oddity is the relatively high number of spearheads and points found in both compounds: one would imagine the men would have armed themselves in the face of attack and taken the spears out of the houses. Lastly, a piece of modern pressed metal was recovered in the Boschoek midden and hints at the post-abandonment disturbance of its deposits (Fig. 5c).



Figure 5. Metal artefacts from house S6 (a), house S8 (b) and from a Boschoek midden (c).

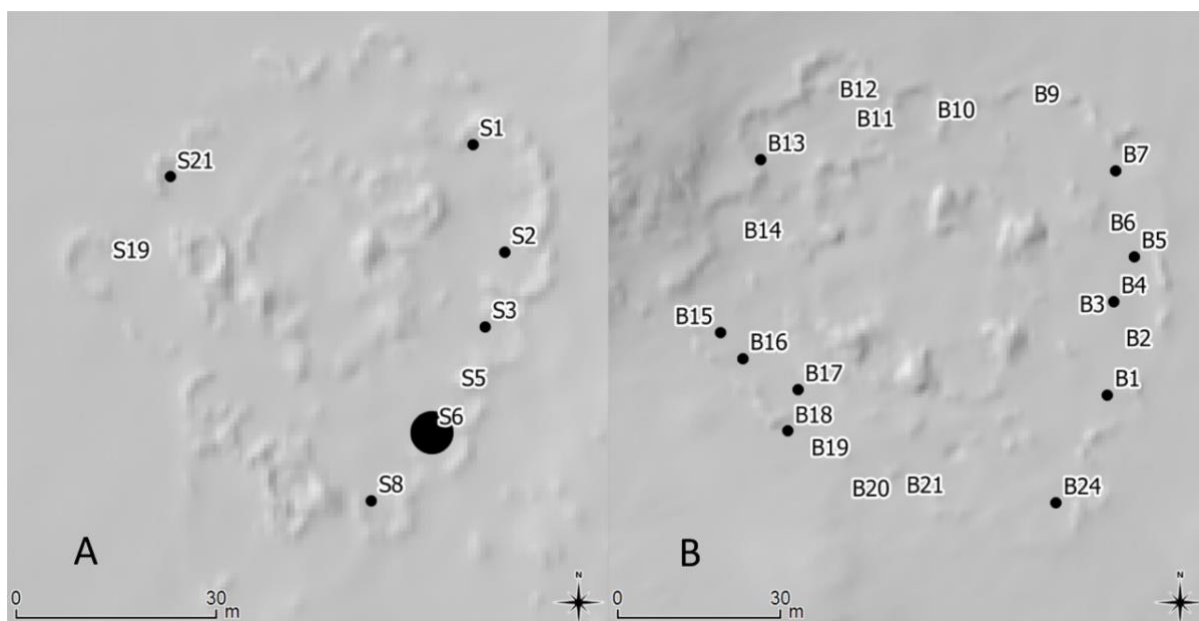


Figure 6. The distribution of all metal finds at Sun Shadow (a) and Boschoek (b). The size of the black circle indicates the number of objects from each house excavation; see Table 2 for details.

Stone

A variety of stone artefacts were excavated at the two compounds, but their distribution is uneven (Table 3). Sun Shadow produced 169 stone artefacts and all the houses contained at least a few; however, over two-thirds of Sun Shadow's collection of stone artefacts came from house area S1, and this house also had the largest diversity in types. Among its finished tools were an adze, two burnishing stones, two grindstones and seven hammers. There were also an unusually large number of flaked stones and manuports (unmodified pieces of stone) in the S1 area. More detailed analyses might show that the

stone flakes were used as scrapers in hide working (cf. Mason 1969; Binneman & Van Niekerk 1986). Furthermore, this area produced a stone amulet and a piece of ochre.

The diversity and number of stone artefacts in the other houses at Sun Shadow were more limited. All houses in Sun Shadow contained grinding stones¹, and about half the houses contained a few flaked stones and manuports. Two houses, aside from S1, contained burnishing stones. These numbers suggest that grindstones were part of the standard kit of every house, and a few stone flakes and manuports were not unusual either. The few burnishing stones suggest a special activity (burnishing pots?) that may have been restricted to only a few members of this compound.

Table 3. Stone objects recovered from Sun Shadow (S) and Boschoek (B). Those recorded on excavation maps or post excavation photos, but not included within the collection, are denoted by ‘x’.

House	Adze	Burnisher	Hammer	Grinder	Flaked	Manuport	Ochre	Mica/specularite	Amulet	Crystal	Bog iron	Ironstone	Sum
S1	1	2	7	2	61	46	1	-	1	-	3	-	124
S2	-	-	-	4	-	1	-	-	-	-	-	-	5
S3	-	-	-	1	-	-	-	-	-	-	-	-	1
S5	-	-	-	6	3	2	-	-	-	-	-	-	11
S6	-	-	-	5	-	7	-	-	-	-	-	-	12
S8	-	1	-	x	3	-	-	-	-	-	-	-	4
S19	-	4	-	4	5	-	-	-	-	-	-	9	22
S21	-	-	-	5	2	3	-	1	-	-	-	1	12
B1	-	-	-	8	-	-	-	-	-	-	-	-	8
B2	-	-	-	x	-	7	-	-	-	-	-	-	7
B3	-	-	-	-	-	2	-	-	-	-	-	-	2
B4	-	-	-	1	-	6	-	-	-	-	-	-	7
B5	-	-	-	5	-	3	-	-	-	-	-	-	8
B7	-	-	-	x	-	-	-	-	-	-	-	-	0
B10	-	-	-	x	-	8	-	-	-	-	-	-	8
B13	-	-	-	x	-	-	-	-	-	-	-	-	0
B14	-	-	-	1	-	-	-	-	-	-	-	-	1
B15	-	-	-	x	-	1	-	-	-	-	-	-	1
B16	-	-	-	2	1	1	-	-	-	2	-	-	6
B17	-	-	-	5	-	-	-	-	-	-	-	-	5
B18	-	-	-	2	6	-	-	1	-	-	-	-	9
B20	-	-	-	-	-	-	-	-	-	-	-	-	0
B21	-	-	-	1	-	5	-	1	-	-	-	-	7
B24	-	-	-	x	-	17	-	-	-	-	-	-	17
BM1	-	-	-	-	278	1032	-	-	-	95	-	-	1405
Sum	1	7	7	52	359	1141	1	3	1	97	3	10	1682

The large number of stone artefacts at Sun Shadow's house area S1 is probably because the excavation here was more extensive (around 150 m²). Most of the other excavations only exposed the house floor and a small area beyond; usually, these excavations did not exceed 16 m² per house area. If most of the activities with stone artefacts took place outside of the houses, it may be no surprise that few stone artefacts were recovered from the limited house excavations. In other words, we may be looking at the spurious results of the excavation strategy rather than any meaningful cultural pattern in stone artefact use at Sun Shadow. Beyond that, it is noteworthy that bog iron and iron stone were only found at Sun Shadow, as were burnishers. These may point to specialised activities at certain houses in this compound.

¹ Relatively few grindstones were collected, but many were mapped.

At Boschoek, on the other hand, stone artefact diversity is relatively low. Over 90% of the stone artefacts came from the excavation of the Boschoek midden and not from the house areas. This again suggests that most of the stone tools were being used outdoors when the site was abandoned. More than two-thirds of the stones from the midden, however, were manuports, with the remaining majority comprising flaked stone. These manuports were predominantly small pebbles (approximately 5 mm in length) that appear natural and need not have been collected. There were a notable number of crystals recorded within the midden materials, but a closer look revealed that they are in fact fragments of clear quartz.

Fauna

The faunal remains from these two compounds have not been analysed by a specialist; we only have bone counts. Nevertheless, these reveal interesting distributions (Table 4). Sun Shadow produced a little under one-third of all the faunal remains from these two compounds. All eight excavated house areas produced bone, but in notably different quantities. The house S1 area, which was the largest excavation, produced surprisingly little bone; however, house S6, which had a wealth of metal artefacts and beads as described earlier, also had the highest number of bones: nearly one-fifth of all the bones from the two compounds. The correlation between beads and bones may be spurious though, since it cannot be seen in the other house excavations: house S2, for example, which has the second highest number of bone fragments at Sun Shadow, contained very few beads and metal items. Without a more detailed analysis, it is difficult to know what the large number of bones at house S6 may signify.

Table 4. Fauna recovered from Sun Shadow (S) and Boschoek (B). Note that the counts include whole and fragmented pieces.

House	Bone	Ostrich eggshell	Ivory	Sum
S1	15	-	-	15
S2	48	-	-	48
S3	1	-	-	1
S5	7	-	-	7
S6	196	-	-	196
S8	3	-	-	3
S19	29	-	-	29
S21	5	-	-	5
B1	22	-	-	22
B2	20	-	-	20
B3	27	40	-	67
B4	27	-	-	27
B5	5	-	-	5
B7	55	8	-	63
B9	1	-	-	1
B10	1	-	-	1
B13	38	-	-	38
B14	24	-	-	24
B15	63	-	100	163
B16	48	18	-	66
B18	52	260	-	312
B19	4	-	-	4
B21	41	-	-	41
B24	109	-	-	109
Sum	841	326	100	1267

A few of the house areas at Boschoek produced no bone at all. At the other extreme, the highest number of faunal remains here came from house B15, and two-thirds of these were fragments of ivory. Like the hoard of iron at house S6 in Sun Shadow, this unusual wealth of a presumably valuable material may point to craft specialisation or a stash of private resources for trade and exchange. A closer examination would be required to ascertain whether the ivory was unworked, or whether it consisted of fragments of a finished product, such as bangles. Curiously, the largest quantity of unworked ostrich eggshell

comes from two houses near B15, so this south-western (lower left) quadrant of the compound contains high numbers of unusual faunal remains, and some of the occupants of the houses here may have been involved in producing bone and shell ornaments (Fig. 7).

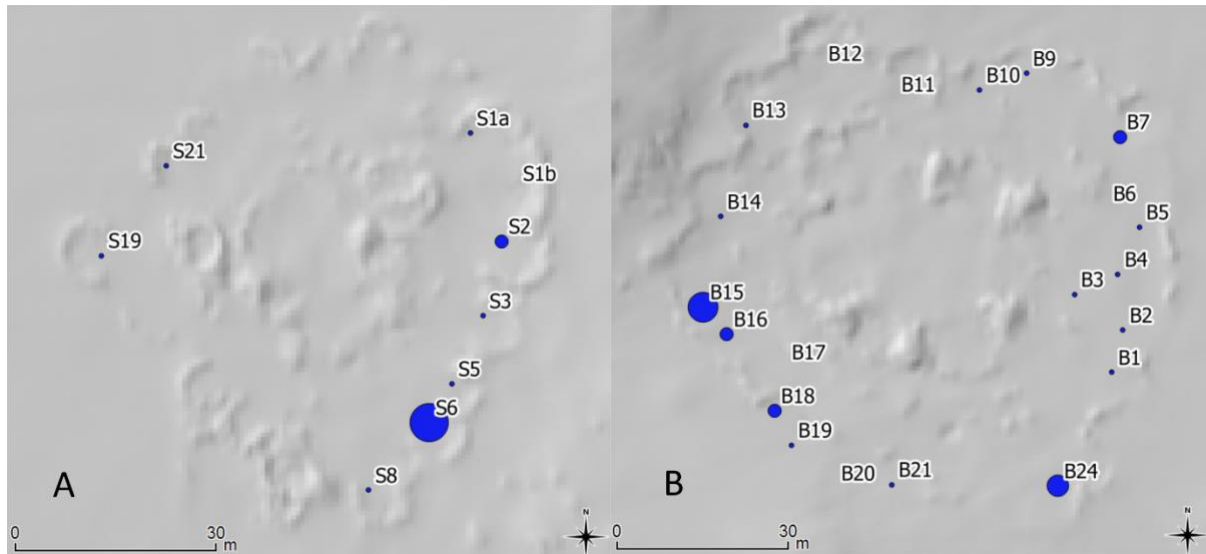


Figure 7. The distribution of all collected faunal material from excavated houses at Sun Shadow (a) and Boschoek (b). The size of the circle indicates the number of objects from each house excavation; see Table 2 for details. The finds from the Boschoek midden have not been indicated.

In terms of actual animal bones, house B24 in the south-eastern quadrant produced the largest number of faunal remains (Table 4). More faunal material came from the midden, but it has not been included in Table 4 as the counts were incomplete. While examining the collection, a human mandible was encountered in the sample and the first author did not have ethics clearance to analyse human remains, so four boxes of faunal remains from the midden were not studied. It is estimated that this would have added another 500-1000 bone fragments to the data base.

Pottery

There is much to be said about the ceramic collection from these two compounds, but here we will only look at the general distribution of this class of artefact. A detailed typological and spatial analysis of the pottery distribution will be presented in a forthcoming article. The Sun Shadow collection contained 62 whole or partial ceramic vessels, whilst Boschoek contained 139. The average number of ceramic vessels per house is seven or eight pots of various sizes. Around one in four pots were decorated; however, as with the other classes of artefacts examined so far, the ceramics are not evenly distributed across the two compounds, and the anomalies in the spatial patterns provide interesting clues to the activities and social organisation of space.

For the analysis here, we report on the number of potsherds rather than on the distribution of whole vessels (Table 1). In addition, we mention a few unusual ceramic objects. On average, each house area excavation in Sun Shadow produced about 475 potsherds, while in Boschoek the equivalent count is only about 230. It seems probable that not all potsherds excavated at Boschoek were collected. The house S1 area produced about half the sherds in the Sun Shadow collection, and this is certainly a result of the large area excavated. At Sun Shadow, houses S2, S5, S6 and S21 contained an average number of sherds, while houses S3, S8 and S19 had fewer than expected (Fig. 8). It may be that many pots from these houses were in use outdoors at the time, and so were not encountered in the house excavations. House S8 produced the only ceramic pipe bowl found in these collections (Fig. 9a).

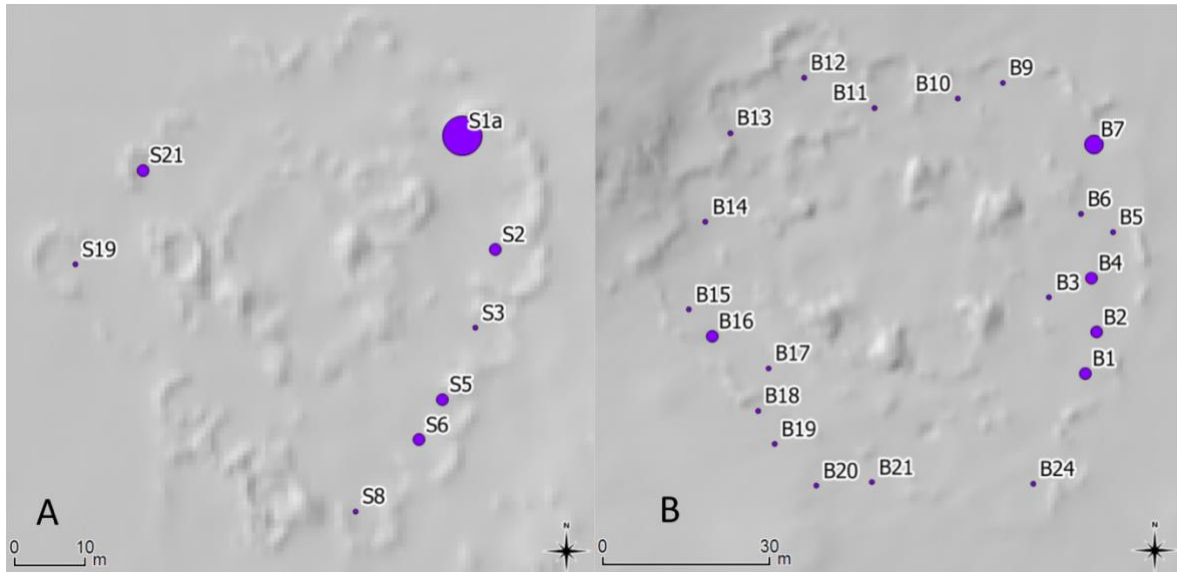


Figure 8. The distribution of all potsherds from excavated houses at Sun Shadow (a) and Boschoek (b). The size of the circle indicates the number of objects from each house excavation; see Table 2 for details. The sherds from the Boschoek midden have not been indicated.



Figure 9. Ceramic pipe bowl found in Sun Shadow house S8 (a); ceramic figurine of an animal (b); broken pedestal base (c); and double cone-shaped object (d). The latter three objects are from the Boschoek midden.

At Boschoek, slightly less than a third of the potsherds came from the midden excavation. The midden also produced some unusual ceramic objects (Fig. 9b-d). The double cone-shaped object is also known from the contemporary sites of Lebenya (Jordaan 2016), Olifantspoort 61/71 and Suikerbosrand 103/73 (Mason 1986). The broken pedestal base (Fig. 9c) is like objects reported from Lebenya (Jordaan 2016), Klipriviersberg and Suikerbosrand 103/73 (Mason 1986). This may be what Maggs (1976a: fig. 43 no. 4, fig. 59 nos. 1 & 17) refers to as a pedestal cup: a characteristic southern Sotho ceramic form. Another possibility is that it is a pot lid knob (cf. Mason 1986; Pistorius 1992: plate 13). The ceramic figurine (Fig. 9b), which is missing its head and its hind legs, is similar to objects found at Klipriviersberg 31/78 and Suikerbosrand 103/73 (Mason 1986; Pistorius 1992: plate 16). Beyond the midden, house B7 produced an inordinately large number of potsherds (Fig. 8b), while at the other extreme, houses B9, B11 and B20 had none, or just one sherd. In general, the houses on the right-hand side of the Boschoek compound seem to have produced more sherds.

Building Material

Various classes of finds in the collections from Sun Shadow and Boschoek can be described as building materials. This includes fragments of mud wall (*daga*), wood, reeds, charcoal (from burnt doors, posts, and roof beams) and thatching slag (from burnt thatched roofs). In addition, the field maps of the excavated houses showed the location of other building features such as doors and door slides. The distribution of these materials is shown in Table 5 and described below.

Table 5. Building material recovered from Sun Shadow (S) and Boschoek (B). Those recorded on excavation maps or post excavation photos, but not included within the collection, are denoted by ‘x’.

House	<i>Daga</i>	Reed	Wood	Charcoal	Thatching slag	Door slide	Sum
S1a	45	x	x	373	-	-	418
S2	-	-	-	1	-	-	1
S3	-	-	-	-	-	-	0
S5	-	-	7	3	-	-	10
S6	-	1	-	149	-	-	150
S8	-	-	164	27	-	-	191
S19	-	-	-	-	-	-	0
S21	-	-	-	x	-	-	0
B1	-	-	x	-	-	-	0
B2	-	-	-	-	-	-	0
B3	1	-	-	-	-	-	1
B4	-	x	-	x	-	-	0
B5	-	-	-	-	-	x	0
B6	-	-	-	-	-	-	0
B7	-	-	x	-	-	-	0
B9	-	-	-	-	-	-	0
B10	-	-	-	-	-	-	0
B11	-	-	-	2	-	-	2
B12	-	-	-	2	-	-	2
B13	5	-	14	-	-	x	19
B14	-	-	-	x	-	x	0
B15	6	-	-	-	10	-	16
B16	-	x	-	1	-	x	1
B17	3	x	-	-	-	x	3
B18	-	-	-	-	-	-	0
B19	-	x	-	x	-	x	0
B20	-	-	-	-	-	-	0
B21	-	x	x	x	-	x	0
B24	-	-	3	-	-	x	3
BM1	-	-	1	5	-	-	6
Sum	60	1	189	563	10	0	823

Daga: The houses at these two compounds seem to have been mud-walled and thatch-roofed, cone-on-cylinder structures. The excavations laid bare the *daga* floors and often also the basal portion of walls.

Most houses had a low centre dividing wall (*borobalo* in Setswana, see Frescura & Myeza 2016) made of *daga*. Although ubiquitous, *daga* was only collected from a few houses so the presence of this material in the collection does not provide information on its actual distribution at the site. Some of the collected fragments of *daga* had clear reed impressions, and this may explain why they were collected.

Reeds: Several house maps show the position of reeds as recorded during the excavations. Some houses, such as B17, show a line of reeds on the interior part of the house wall, suggesting that a screen of reeds may have covered and perhaps decorated the interior walls of the house. In other houses, such as B21, the reeds seem to have been set within the mud wall, probably forming the reed core of a wattle-and-daub wall construction (Frescura & Myeza 2016). In house B16, the back wall was apparently made only of reeds without any *daga* packing, while the front half had a clay wall. Interestingly, four of the five houses that showed reeds on their maps are clustered in the south-western quadrant of Boschoek. It is not clear whether this means that the other houses at Boschoek did not make use of reeds in their architecture, or whether reeds simply were not recorded there by the excavators. At Sun Shadow, only the map of house S1b shows reeds, and these are in the front courtyard wall rather than in the house itself. All in all, a confident conclusion cannot be offered, but there are hints that the use of reeds in house architecture was not a standard feature, and perhaps serves as an identifier of variations in architectural traditions among the inhabitants of the compounds.

Wood: Several house maps show wooden posts, and the best-preserved samples of this material seem to have been collected. These are now in a fragmentary state, with counts indicated in Table 5. In this table, the houses with an 'x' in the column for wood are the ones with field maps indicating that wood was present, but apparently none was collected. On the house maps, a central post (*pinagare* in Setswana, see Frescura & Myeza 2016) is often indicated, set in the central dividing wall. Wooden posts are also sometimes shown flanking the entrance to the house. These were presumably the jambs for the sliding doors which were made of wood. Curiously, the collection from house B24 also contains a (cattle?) horn, with a label stating it was used as the back post for the sliding door to the house. The wood fragments from B13 include a piece that is clearly from a door and not from a post. The map of house S8 shows that the wood fragments came from the entrance of the house and indeed one of the bags from this collection is labelled 'door'. Given that all the houses at Sun Shadow and Boschoek seem to have been mud-walled and thatch-roofed, cone-on-cylinder structures, wood must have been used in the construction of all of them. The fact that some of the house maps show no indication of wood is therefore likely to mean that either the wood had completely burnt to ash, or that it was so fragmentary that the excavators did not record it.

Charcoal: Much the same can be said about charcoal. Since it appears that cattle dung formed the principal fuel for cooking, heating, potting and ritual fires in this area (Chingono & Sadr 2023), it is probable that the charcoal fragments found in the houses originate from the burning of the wood that was used in their construction. One might have expected that all the houses would contain some charcoal fragments, but this is not the case. As with the wood, it is likely that the absence of charcoal simply means that either it was burnt to ash or that it was too fragmentary to record. Given the highly variable quality of the field maps, it is also possible that some excavation crews were not assiduous in recording their observations.

Thatching slag: The collection of materials from house B15 includes thatching slag, a residue from the burnt house roof. It is somewhat surprising that none of the other houses produced this material, but this may be due to how slag is formed, or the excavator's lack of familiarity with this unusual material.

Door slide: The wooden door of some pre-colonial Batswana houses had a grooved slide to guide it into position (e.g., Mason 1986; Pistorius 1992: plate 12; Maggs 1993). In some cases, these slides are made of stone, and in others they are clay features. Several house maps at Boschoek indicate the presence of such door slides, but the material from which it was made is not specified, and none were collected. Two of the houses, B5 and B16, show a step at the entrance instead of a door slide, but this may in fact point to the same feature. None of the house maps from the eastern side of Boschoek indicate any door slides; if this is not due to oversight, it may indicate that a different type of door was in use here, which

may indicate variations in architectural tradition among the inhabitants. At Sun Shadow, eight of the nine houses excavated had stone or clay door slides. These are not clearly indicated on the excavation maps, but they are shown on post excavation photos of the houses. House S6, which contained an unusually large number of beads and iron artefacts, stands out as the only one to be excavated at Sun Shadow with no indication of a door slide or step at the entrance.

Stone underflooring: Only house B9 was recorded as having a stone slab underflooring, and this pavement left spaces for internal dividing walls and a space for a door slide. Similar stone underflooring was reported by Mason (1986) at two of the 12 excavated huts² at the Suikerbosrand site 103/71, approximately six kilometres south-east of Boschoek. He interpreted the stone underfloor to represent an earlier house that was then rebuilt with a clay floor. Another possibility is that the stone acted as a foundation for the raised clay floor. In either case, the other houses in both Sun Shadow and Boschoek were seemingly built directly onto the ground, with no intervening stone layer. The rarity of collected artefacts from house B9 (just a single bone fragment) may suggest that either this house was under construction, or that it had already been abandoned when Boschoek was burnt down.

4. Discussion

Overall, the architecture of the two compounds, their location within the same neighbourhood and the types of finds excavated from each, suggest that they were contemporaries. Both had burnt down in the terminal phase of settlement and the inhabitants never came back to salvage their belongings. The finds from the two compounds thus represent a snapshot in time, with all objects left where they were at the time of abandonment. Kent Rasmussen (1978) concludes that Matabele invaders reached the Vaal River in August 1823 and that they drove the Bakwena Bakhudu out of the Suikerbosrand region late that same year, so we presume Kweneng was abandoned in late winter or spring of that year. Given the presence of much material in the front courtyard of house S1 at Sun Shadow, we assume the abandonment took place in daylight hours when activities were taking place outdoors. Thus, our sample of finds from these two compounds is highly biased, because the primary excavations took place in house floor areas and most of the collected artefacts come from within the houses. What is lacking is equivalent exposure beyond the house into the open yards, both in front and behind the houses, where most daily activities would have taken place. This bias cannot be rectified until further excavations are carried out at these compounds. Until then, it would be premature to draw any definite conclusions about the social organisation of space in these two compounds, although several hypotheses can be generated from the data for future testing.

The focus on the excavation of houses, for example, does allow us to estimate the size of the population that lived at Sun Shadow and Boschoek, and to present a hypothesis on the organisation of households within the compounds. Given the size of each excavated house floor – about 2-3 m in diameter – we estimate that, on average, two people would have slept in each. This figure tallies well with the census provided by Schapera (1935) for Ramoseki ward in Serowe, Botswana, where 51 houses sheltered a total of 95 people: 58 adults and 37 children. Schapera counted some houses where three individuals slept: some contained two adults and an infant; others housed a mother and two children, while some were occupied by three girls. Many houses were occupied by a man and wife, and some by a single individual. Indeed, a few houses were unoccupied and used for storage.

Using Ramoseki ward as an analogy, we can hypothesise that our two excavated compounds, with their ca. 25 houses each, might have sheltered around 50 souls. Another approach to counting residents in these compounds is to count the kitchens or cooking areas, as suggested by one of the reviewers of this paper. Huffman (1986, 1988) suggested that the small stone circles between the houses and central

² Schapera, along with most anthropologists and archaeologists working in southern Africa, used the word hut to refer to the traditional African domicile. We prefer to use the nomenclature from Frescura and Myeza (2016) who make a clear distinction between house and hut. The distinction is also made in Setswana, where a house is referred to as *ntlo* and a hut as *mogope* (Brown 1987). Interestingly, the same distinction was made in pre-colonial times by European travellers such as William Burchell (1824) and John Campbell (1822), but in colonial times European writers regularly belittled traditional African houses by calling them huts.

kraals represent kitchens or cooking areas. These were perhaps roofless, with the low walls serving as, or anchoring, wind breaks (Taylor 1984). Only one of these features was excavated – the kitchen feature associated with house B4 – revealing coal (charcoal), ash and several potsherds all within a scattered one-course high stone circle that was possibly used to shelter a fire from the wind, or to stop it from spreading. If indeed they were cooking areas, we cannot tell if all of them were used as such in the terminal phase of these compounds. Furthermore, there is a possibility that some houses had open cooking areas (cf. Maggs 1976a). But assuming for now that the small stone-walled kitchens are a useful indication of population size, we note that Boschoek contains 21 such features. If all were in use at the time of abandonment, it might suggest the presence of 21 wives. The number of their children can only be estimated, but an average of two per wife may be a reasonable assumption. The same reviewer also suggested that the number of cattle kraals may indicate the number of husbands residing at Boschoek. Again, the identification of these and their distinction from pens exclusively for small livestock and for calves is not unproblematic. Furthermore, there is the possibility that some of the central stone circles served as exclusive meeting places rather than animal pens (cf. Pistorius 1992). Be that as it may, the reviewer estimated around five to seven husbands at Boschoek, based on the number of livestock pens. All this would add up to a total of 47-49 souls residing at Boschoek, which is close to the estimation based on Schapera's (1935) census data from the Ramosedi ward in Botswana.

The ring of houses around the central livestock pens, at the archaeological compounds, resembles the layout of the two wards mapped by Schapera (1935). He defined a ward as "...a collection of households living together in their own hamlet, and forming a distinct social and political unit under the leadership and authority of a hereditary headman..." (Schapera 1938: 19). Although Ramoseki and Ramopedi wards contained more inhabitants (95 in one and 106 in the other), the estimated population of each of our two archaeological compounds fits comfortably in the lower end of the range of Batswana ward sizes as reported by Schapera (1935). Consequently, we can propose that our two compounds each represent pre-colonial examples of a Batswana ward. In Setswana, each compound could thus be referred to as a *kgotla*, a *kxoro* or a *motse* (Schapera 1935). The choice of words seems to be a matter of local usage and we cannot know which label was preferred by the inhabitants of Sun Shadow and Boschoek.

To estimate the number of households at Boschoek, we can again propose different approaches. According to Schapera (1935: 214), a household is a subset of the ward and can be defined as "a man with his wife or wives and dependent children, together with any other relatives or unrelated dependants, married or not, who may be attached to him". In Mochudi's Ramopedi ward, the 106 inhabitants were divided into 16 households, while at Serowe's Ramoseki ward, the 95 inhabitants lived in 18 households. At Ramoseki, most of the households had two or three adjacent houses; one of them had a single house and two had, respectively, five and six houses each. Using the figures from Ramoseki and Ramopedi wards as an analogy, we can propose that each of our two archaeological compounds contained 7-10 households. This assumes, of course, that the precolonial composition of Batswana households in the Highveld resembled those in the Bechuanaland Protectorate of the 1930s. This is by no means certain since polygamy had gone out of fashion in the 1930s. It is therefore probable that the pre-colonial polygamous households at Kweneng were larger than those of Ramopedi and Ramoseki wards, so seven households can perhaps be considered a maximum in each of our two archaeological compounds.

Following archaeological household examples found in Pistorius (1992, 1994), Anderson (2009) and Jordaan (2016), and from ethnographic descriptions given in Molema (1920), Hoernlé (1962) and Schapera and Goodwin (1962), as well as the shape of the perimeter wall of the compounds, Hodgson (2021: figs 4.1 & 4.2) proposed six households (house clusters) at Sun Shadow and five at Boschoek (Fig. 10a). For a variation on Hodgson's hypothesis, one of the reviewers of this paper proposed six households at Boschoek, based on "...the 'flow' of the back walling" (Fig. 10b). Another approach is based on the excavated finds from the different houses (Fig. 10c). For example, the distribution of artefacts at Boschoek shows two distinct hotspots, one on the eastern (right-hand) side of the compound (B1-B8) and one on the south-western (bottom left) side (B15-B19). These might represent separate households, while the houses with few artefacts in the northern and southern section of the compound

may represent other households. Although the residual doubt created by the biased sampling makes this kind of reconstruction highly provisional, future excavations and more detailed artefact distribution studies, especially of ceramic vessels, might allow us to arrive at an artefact-based model for household distributions at Boschoek that complements the approach based on the morphology of the perimeter wall.

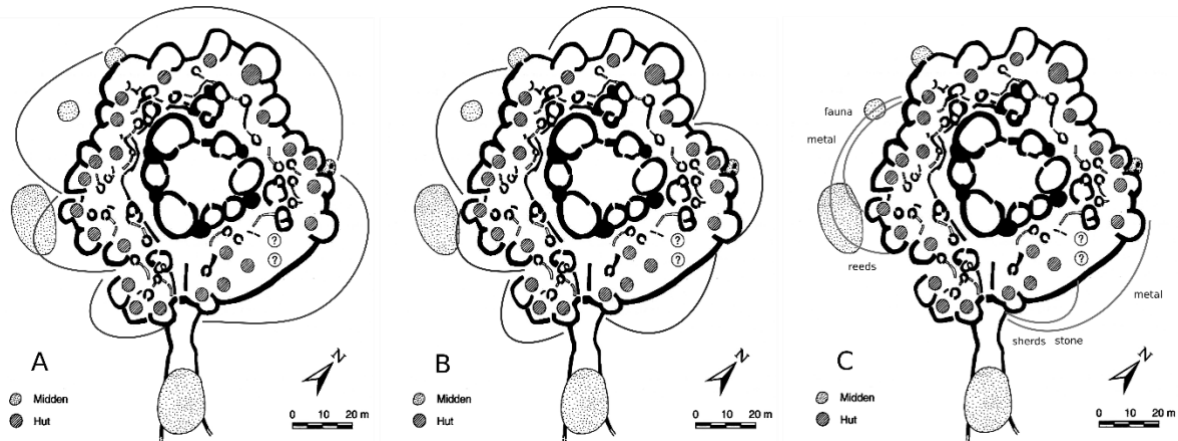


Figure 10. Possible households at Boschoek. Hodgson's (2021) proposed distribution of households (a); a household distribution model suggested by one of the reviewers of this paper (b); partial indication of possible households based on the frequency distribution of excavated artefacts (c). Background map of Boschoek modified from Huffman (2007).

5. Conclusion

This article aimed to identify and explain the similarities and differences between two neighbouring Late Iron Age compounds that had been excavated a few decades ago at the foot of the Suikerbosrand massif, south of Johannesburg. The results of this study revealed some interesting differences between the compounds, and between the excavated houses within the compounds. We were able to favourably compare the compounds with wards, as defined by the ethnographer Isaac Schapera during the first half of the twentieth century at Batswana settlements in what was then called the Bechuanaland Protectorate. Using his ethnographic writings as well as archaeological examples, we can begin to distinguish separate households within the wards, based on the frequencies and types of artefacts found in the houses. Our reconstructions and interpretations are preliminary due to the incompleteness of the record and the lack of information on sampling and collection strategies at these sites during their excavations in the 1980s and 1990s. Nonetheless, the exercise has not been fruitless, and this paper confirms the value of diving deep into the under-analysed archaeological collections at Wits. In this respect, we applaud Aron Mazel and Jannie Loubser's call to arms from three decades ago and recommend such similar studies in the future. As a next step, we will pursue our aim of distinguishing the separate households within the two excavated wards of Boschoek and Sun Shadow through a detailed analysis of the more than 8000 potsherds excavated there.

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