

IRON WORKING AND BURIAL PRACTISES AMONGST THE KGATLA-KWENA OF THE MABYANAMATSHWAANA COMPLEX*

JULIUS C. C. PISTORIUS

*Department of Anthropology and Archaeology,
University of Pretoria, Pretoria, 2001*

and

MARYNA STEYN

*Department of Anatomy, University of Pretoria,
P.O.Box 2034, Pretoria.*

*Accepted for publication May 1995

ABSTRACT

An archaeological survey between Brits and Pretoria revealed the remains of an extensive stone-walled complex which was named the Mabyanamatshwaana origin centre of the Tswana. A survey and excavations of one of these settlements (site ZK001) indicate that it had spatial features characteristic of both the Kwena "kgôrô" and the "letlatswa" of the Pedi (Kgatla) "kgôrô" of Sekhukhuneland. It was subsequently pointed out (in an earlier report, Pistorius 1995) that the "letlatswa" of site ZK001 may have developed as a result of the large scale introduction of iron forging in the centre (kraal complex) of this settlement.

This report suggests that iron working took on formidable proportions in site ZK001 and that high-status and commoner iron forge work places can be distinguished. Iron working was ritualised, since a young man was buried with a hammer and an anvil stone in a "sesigo" in the centre (former kraal) of this "kgôrô". Iron working in the Mabyanamatswaana complex also coincided with conflict at the turn of the eighteenth century. Both the surplus production (trade) of iron and local consumption seem to be important factors which contributed to metal working in this complex.

INTRODUCTION

A previous article reported that an archaeological survey to the north-east of Brits has revealed part of the remains of an extensive stone-walled complex which dates from the seventeenth century (Pistorius 1995). This complex was first recognised by Mason (1968, 1986) from aerial photographs and it was afterwards investigated by means of a small excavation on the farm Zambok Zyn Oude Kraal (258JR). The extent of these remains, which were named the Mabyanamatswaana complex, was substantiated by one of the authors (J. Pistorius) and his co-worker, Francois Coetzee, during a helicopter survey in September 1993. This aerial reconnaissance was followed by the ground surveillance of parts of the farms Elandsrand (570JQ), Elandsfontein (440JQ) and Roodekopjes or Zwartkopjes (427JQ) (Pistorius & Coetzee 1993a, 1993b).

The Mabyanamatshwaana complex extends along the norite series of hills between Rustenburg and Pretoria, with Brits in the middle between these two centres. Together with the site of Rathateng, which is located on

the South Africa-Botswana border, these nuclear areas represent the cradles of the origins of the Kwena (Tswana) and Kgatla (Pedi). These centres are associated with a Hurutshe-Kwena-Kgatla lineage cluster which, after a diaspora which spanned decades or even centuries, moved from these nuclei to establish some of the historical Tswana, Pedi and Sotho chiefdoms of the Transvaal, the Orange Free State and Botswana (Pistorius 1995).

Two settlements on the farm Zwartkopjes, which is situated in the heart of the Mabyanamatshwaana complex, were surveyed (ZK001 & ZK002) and one of them (ZK001) was excavated (Pistorius 1994a). This report discusses the results of the excavation of a young male's skeleton from site ZK001 (UP 28, housed in the Dept. Anatomy, University of Pretoria); the physical features of this individual; the funerary goods which consisted of a hammer and an anvil stone which were found with these remains and the fact that the body was buried in a grass container similar to the "sesigo" in which the Kwena and the Kgatla used to store their grain.

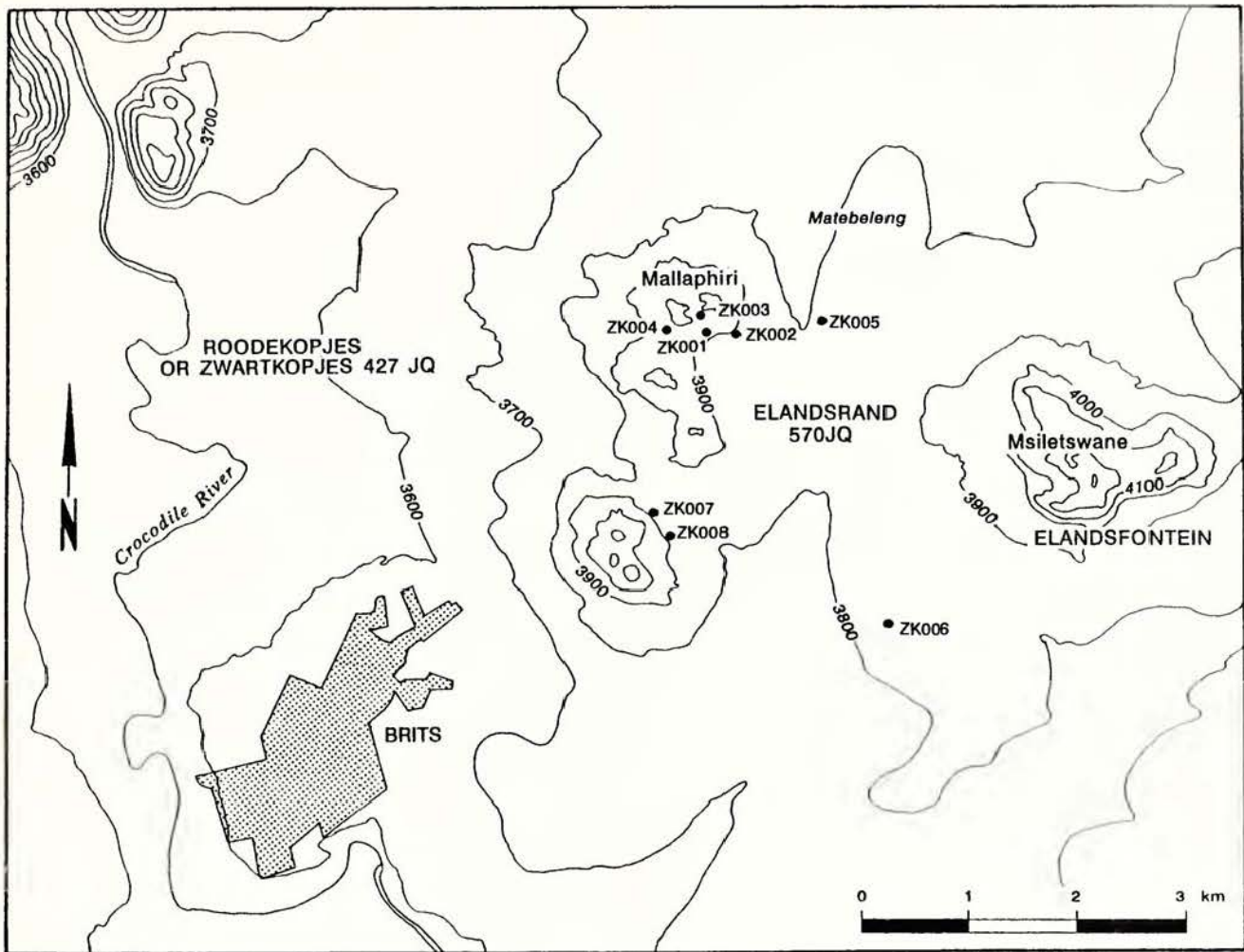


Fig. 1. Sotho-Tswana settlements which date from the Iron Age to the colonial period in the Brits district of the Transvaal.

THE ARCHAEOLOGICAL INVESTIGATION

A cluster of four stone-walled settlements, namely ZK001, ZK002, ZK003 and ZK004, which occur on the southern border of Roodekopjes or Zwartkopjes (247JQ), directly adjacent to the northernmost houses of Brits in the suburb of Elandsrand, was investigated (Fig. 1). The first two settlements (ZK001 and ZK002) were surveyed and site ZK001 was also excavated.

The features of site ZK001

Site ZK001 (27.49E; 25.35S) is situated at an average altitude of 3900 m above sea level. This settlement is marked by an outer boundary wall which consists of at least 29 scallops which contain patches of baked clay with pole impressions which are the remains of houses. The settlement's kraal complex consists of seven linked enclosures which encircle a central inner space. The intervening unenclosed space of the site is the area between the scallops (or "malapa") and the kraal complex. This part of the settlement is marked by a free-standing wall which, together with at least two-thirds of the outer circumference of the kraal complex, formed an entrance and a corridor into the settlement.

Two types of small circular enclosures were associated with the corridor wall, namely enclosures which form part of this wall and free-standing enclosures in close proximity to this wall. Most of these enclosures, which had clearly visible entrances, are dilapidated. Several common forge niches, which can be recognised from their semi-circular ground plans, were built against the free-standing wall and in the central inner space.

Two additional features can be added to these three spatial components which form the body of site ZK001, namely an appendix which is attached to the body of ZK001 and a further extension which consists of, *inter alia*, the settlement's main entrance, low-rising stone walls and an oval enclosure. Consequently, site ZK001 can actually be divided into three parts (Fig. 2), namely:

ZK001.1, or the main body of the settlement which consists of the three spatial units outlined above;

ZK001.2, or an appendix attached to the main body of the settlement; and

ZK001.3, or a frontal part which consists of the main entrance which leads to the inner part of the site,

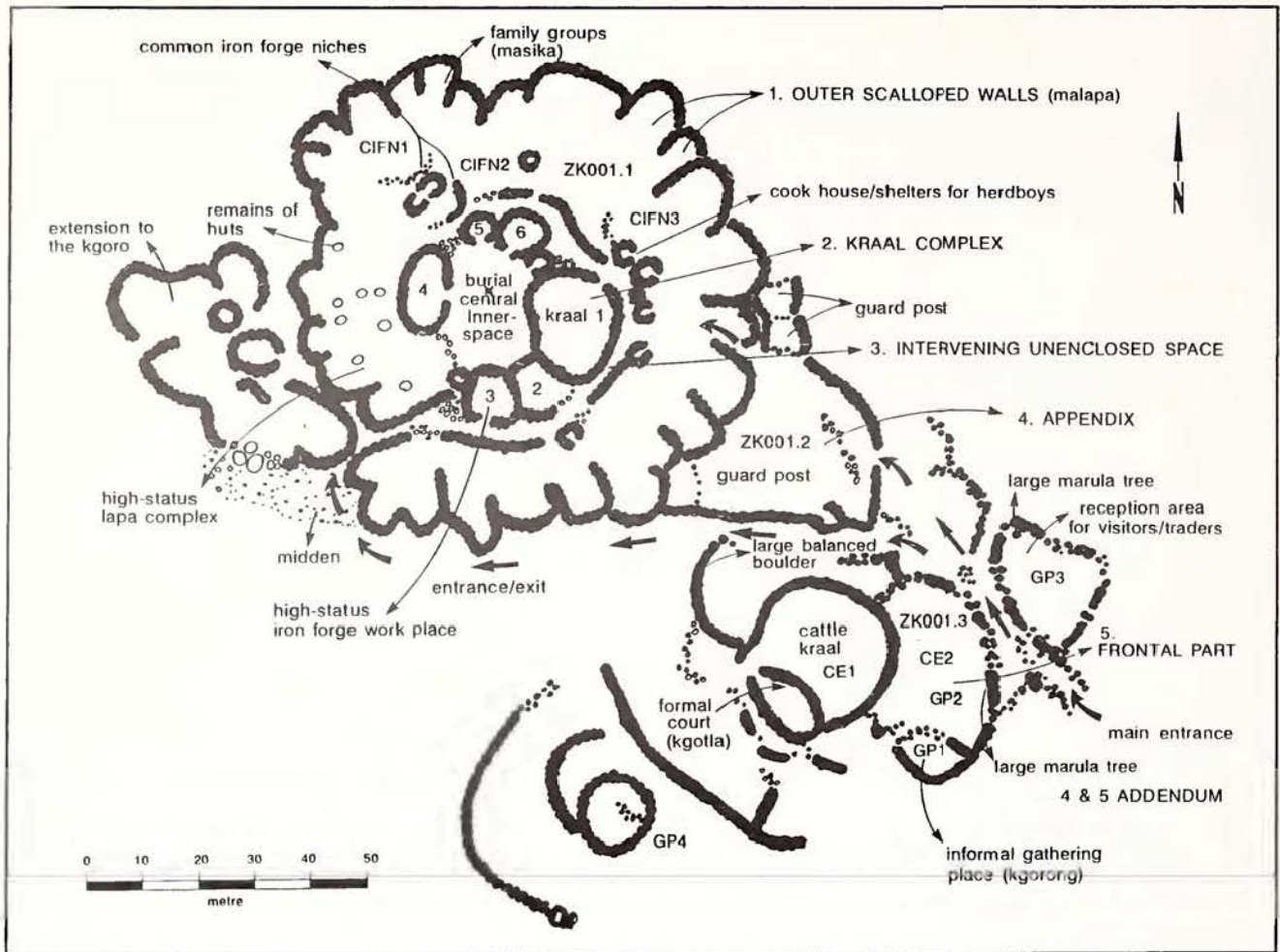


Fig. 2. A plan drawing of site ZK001 reveals three main spatial features: a central body (ZK001.1), an appendix (ZK001.2) and a front part (ZK001.3). The latter two features are referred to as the addendum which corresponds in its spatial composition and features to the "letlatswa" of the Pedi (Kgatl) "kgôrô".

low-built free-standing and circular walls and a conspicuous oval enclosure which has the highest wall in this spatial unit.

Using Tswana and Pedi ethnography, the previous report (Pistorius 1995) pointed out that the body of site ZK001 (ZK001.1) reflects the features of a Tswana "kgôrô" and that the front part of the site (ZK001.2) resembles the Pedi (Kgatl) "letlatswa" (Fig. 2). It was furthermore argued that the spatial nexus which characterises Kwena settlements and which exists between a main dwelling, a main cattle kraal and a formal court ("kgotla"), cannot be distinguished in the body of site ZK001. This, however, does not imply that such a spatial relation did not in fact once exist in the body of site ZK001. The large scale introduction of secondary iron working in the Mabyanamatsywaana complex may have pushed the main (or ceremonial) cattle kraal, the formal court and the fireplace of the men from the centre of these settlements to their outer circumferences where these features became known as the "letlatswa". It is also possible that the "letlatswa" developed after a process of social stratification set in between clusters of settlements of the Mabyanamatsywaana complex.

THE EXCAVATION

Excavations were conducted in all the spatial features of site ZK001. The most important features discussed in this article include the excavations of the grave in the central inner space of the kraal complex and the high-status and common iron forge work places. Excavations in some of the other spatial units are briefly referred to.

The high-status living area

The high-status living area of site ZK001, which is also referred to as the main "lapa" complex, was identified by its high or elevated position against the foot of a low-rising norite knoll. The fact that this cluster of dwellings was located opposite or in close proximity to a main (cattle) kraal and from the number of house remains which could be observed in these "malapa". There is little doubt that this part of the site was occupied by the ruler of this settlement. From the remains of at least seven huts which were excavated within the confines of the main "lapa" complex, two types of huts were distinguished. The first type was generally larger in diameter than the second type and was interpreted as dwellings. The second type were demarcated by upright

standing foundation stones and were interpreted as storage huts and as huts in which food was prepared.

The kraal complex

The kraal complex of site ZK001 consists of seven linked circular enclosures which are referred to as Kraals 1 to 7. These enclosures circumscribe a secondary enclosure (see Maggs 1976:25; Pistorius 1992:15) which is also referred to as a central inner space. Excavations in all these structures (except the smallest kraal, No.7, which was not excavated) proved that these enclosures, as well as the central inner space, were used to enclose stock. In all these enclosures the deposits, which reach a depth of 1,2 m in Kraal 1, consist of levels of dung which vary in depth in the different structures.

The excavated kraals were not used exclusively to shelter stock. Kraal 2 possibly also had another, as yet undetermined, function. This kraal has a large entrance and one third of its surface is covered with what seems like a stone platform. Similarly, Kraal 3 served as a workplace for high-status iron forgers. The central inner space was not only used as a shelter for domestic stock (such as cattle, judging by its size), but also as a workplace for common iron forgers and as the place where the burial of the young man took place.

The high-status iron forge

High and low status iron forges were distinguished in site ZK001. The high-status forge shelters in Kraal 3 were clearly of a different stature than the smaller and more temporary iron forge niches which occurred at random in some of the enclosures of the kraal complex (Kraals 4 and 6), in the central inner space and against the cook houses and/or herdboys shelters in the intervening unenclosed space (Figs 3-5).

The high-status iron forges in Kraal 3 were more impressive and elaborate than the common iron forge niches. These forges had larger numbers of anvil and hammerstones and had possibly been in use longer, or were more intensely utilised, than the common iron forge niches. Only these iron forge shelters were excavated in association with a prominent hearth (furnace) which was shared by two forgers who occupied their own enclosure (Kraal 3) which was spatially located in close proximity to the high-status lapa complex (Fig. 3).

At least two iron forge shelters occurred in Kraal 3. Each shelter consisted of a low and partly semi-circular stone wall which consisted mainly of anvil and hammerstones. These "walls" respectively demarcated several small-sized anvil stones which were grouped together in one of these shelters and two solitary, but larger anvil stones in the second iron forge shelter. (One of these anvil stones was the largest observed in the settlement). Both these forge shelters, which were respectively used for heavy and light forging, were placed more or less at an equal distance from an open hearth. This feature was not found in the common iron forge niches. The hearth was built with a circular stone floor which probably had a low raised clay wall which kept the charcoal on the heat-retaining stones. Iron tools, three of which were



Fig. 3. The high-status iron forge work place in site ZK001 has a thick deposit and occupies its own spatial entity (Kraal 3) in close proximity to the high-status lapa complex.

excavated around the hearth, were heated in this furnace and then hammered on the anvil stones (Fig. 4).

The deposit in Kraal 3 reached a depth of 0,45 m and consisted mainly of ash which was produced by hearths such as the one which was excavated and also perhaps by the preparation of charcoal in this structure for use in this hearth. Several pieces of carbonized logs were retrieved from the excavated deposit.

The central inner space

This feature can be described as a secondary enclosure due to the fact that it is formed by an outer chain of enclosures. Its deposit contained a substantial layer of dung which indicates that this structure was used to enclose stock, most probably cattle given its size. The grave of a young man who was buried near the centre of this spatial feature also supported its use as a cattle kraal, since the burial of important men in the central kraals of villages is, of course, a common phenomenon amongst the Sotho-Tswana (Walton 1958:138; Bruwer 1963:126; Casalis 1965:203). The outer circumference of this spatial unit also contains several common iron forge niches which were haphazardly built against the inner walls of the kraal complex.

The intervening, unenclosed space

This spatial component is located between the outer scalloped wall of site ZK001 and its centrally located kraal complex. It is marked by a free-standing wall, which, by now, has largely collapsed and which is interspersed at short intervals by small circular enclosures. These enclosures can also be observed against the corridor wall and as loose standing enclosures which occur in close proximity to the corridor wall. Three of each of these structures were excavated. The circular enclosures are believed to represent cook houses (huts) and/or shelters for herdboys while the semi-circular enclosures clearly represent common iron forge niches.

The common iron forge niches

Common iron forge niches consist of a few anvil and

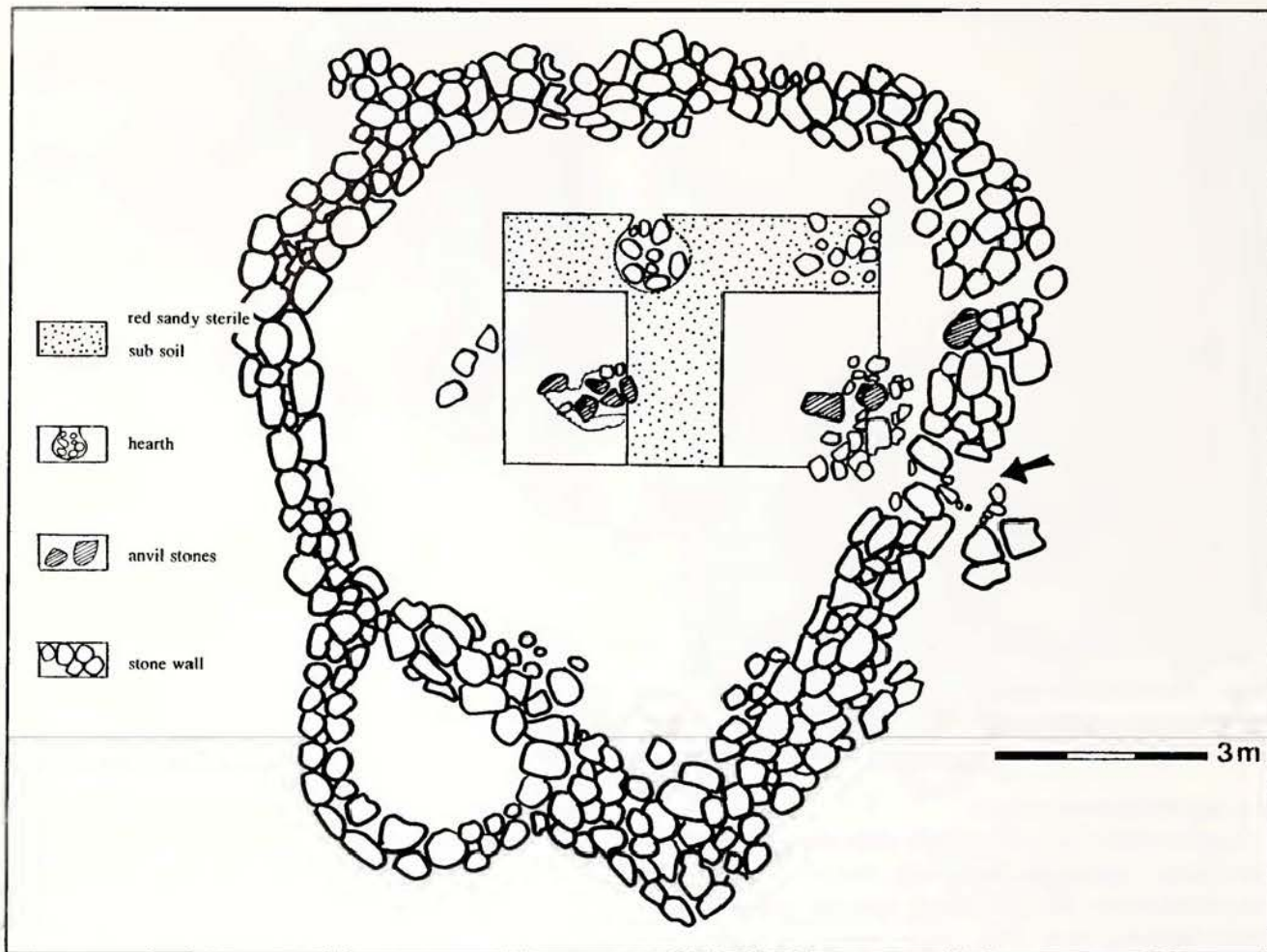


Fig. 4. A plan drawing of the high-status iron forge work place in Kraal 3 shows a more complex spatial arrangement and composition than common iron forge niches. It consists of two groups of anvil stones for heavy and light iron forging and a prominent hearth (furnace) which is shared between these two niches.



Fig. 5. A common iron forge niche in Site ZK001 shows a simple, temporary (make-shift) "construction" which consists of a few random scattered anvil and hammer stones with no indication of a definite hearth (or furnace).

hammerstones which have been arranged in roughly circular, square or other random and indeterminate ground plans. These features are unimpressive in appearance and construction and it seems that the majority of them were used during the latter part of the

occupation of site ZK001. This can be surmised from the fact that they occur on the upper surface of the settlement and have limited, or shallow, deposits. Some exceptions do occur, *e.g.* IF1 proved to have a deposit which was 150 mm deep.

The common iron forge niches were clearly not of the same stature and standing as the high-status forge work place. They were mostly temporary or make-shift shelters with shallow deposits, did not occupy any one enclosure of the kraal complex in full and were spatially distributed over a large part of the centre of the settlement. (Similar forge niches also occur in the veld directly outside the borders of the settlement). These features were subsequently referred to as common iron forge niches. Two of these niches, which are located in the northern sector of ZK001, were excavated (Fig. 5).

THE BURIAL SITE IN THE CENTRAL INNER SPACE

A test trench which was dug through the largest diameter of the central inner space of the kraal complex exposed the well-preserved skeleton of a young male. This individual was buried in a spherical dug-out grave, with



Fig. 6. A grass container (or "sesigo") is used by the Kwena and the Kgatla to store their grain (Bothma 1962: opposite p. 55).



Fig. 7. The skeletal remains of the young man who was buried in a grass container ("sesigo") in the central inner space which also served as a cattle byre. Note the anvil stone in front of the individual's lower legs.

a diameter of approximately 0,80 m, in which a grass container such as a "sesigo" could fit. Amongst the Kgatla and the Kwena, this container, which was plaited and woven with grass, was used to store grain (McDonald 1940:66, 69; Bothma 1962: opposite p. 55; Mönning 1967: opposite p. 130) (Fig. 6).

The body was placed in the "sesigo" in a vertically flexed position, facing the north-west. It is not clear whether the individual was buried in an empty or disused "sesigo", or if the hole was specifically dug with the purpose of placing the sesigo in it. The individual's right upper limb was flexed around the front of the lower legs



Fig. 8. Some of the vertical grass strands with which the "sesigo" was woven.

while the left upper limb was wedged in between the upper legs and the trunk. The legs were crossed at the ankles. Funerary goods consisting of an anvil and hammerstone were placed with the body inside the "sesigo". The anvil stone was placed in front of the individual's flexed legs and the hammerstone was placed against his left lower torso which helped, together with the anvil stone, to support the body in its upright, sitting position in the "sesigo" (Fig. 7).

The individual's head was approximately 1,0 m below the surface of the enclosure and the grave was dug into the yellow sterile soil. Pieces of the woven grass basket were still visible against the sides of the grave (Fig. 8).

A radiocarbon date from one of the ribs of the skeleton provided a date of 130 ± 30 (Pta-6667) BP for the individual.

The skeleton

The skeleton was well preserved although some damage had been caused to the vertebrae and ribs by termites and roots. The top of the cranial vault was damaged, and the skull needed some reconstruction. No distortion occurred and a reasonable reconstruction of the skull could be made. The skeleton was nearly complete and all the long bones, except the right clavicle, were present.

Sex and age

The cranial features are indistinctive as far as the sex of the individual is concerned, and the person was of very delicate build. Nevertheless a tentative diagnosis of a male individual could be made due to the narrow sciatic notch and the shape of the pubic bone. The gonial areas of the mandible are also slightly everted - a male feature. Although a fully erupted permanent dentition is present, most of the epiphyses on the long bones are still open, giving an estimated age of death of 17-18 years (Ferembach *et al.* 1980). Youth may partly explain the delicate build of the individual.

Morphology and population affinity

The morphological features are those commonly found

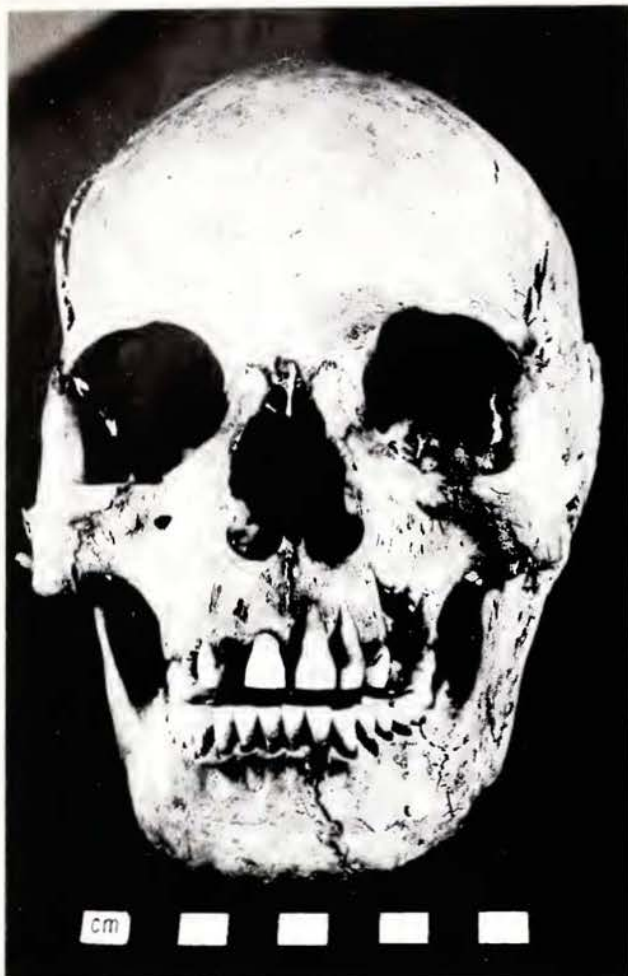


Fig. 9. Reconstructed skull in norma frontalis.

Table 1. Cranial and mandibular measurements (in mm).

Maximum cranial length (L)	188
Maximum cranial breadth (B)	±127
Foramen magnum breadth	31,2
Bimaxillary breadth (GB)	96,5
Upper facial height (G'H)	62,0
Orbital breadth (O ₁)	39,5
Orbital height (O ₂)	34,8
Nasal height (NH)	47,2
Nasal breadth (NB)	±30,1
Projective length of the corpus mandibulae (cpl)	75,0
Symphysial height of the mandible (h ₁)	31,4
Molar-premolar chord	24,6
Min. chord between ant. margins of mental foramina	45,0
Coronial breadth (crrc)	93,7

in South African Negro populations (De Villiers 1968) (Fig. 9). The skull is dolichocephalic, the nose platyrrhine and subnasal prognathism is present. Metrical and non-metrical features can be seen in Tables 1 and 2. Most of the long bones are measurable (Table 3). For the reconstruction of the body height, the combined lengths of the left tibia and femur were used. Calculated with the help of the Lundy and Feldesman (1987) formulae for South African Negro peoples, this yielded an antemortem stature of $164,98 \pm 2,371$ cm. This stature falls well within the range quoted for South African Negro males (Tobias 1972).

Table 2. Non-metrical observations.

Metopism	none
Glabellar prominence	slight
Superciliary eminences	slight
Ophryonic groove	absent
Sutures at pterion	x-shape
Horizontal parietal suture	absent
Mons temporosphenoidalis	absent
Inf. frontal eminence	absent
Parietotemporal suture	Horizontal, does not rise above pterion
Ossicle at asterion	present on left side
Lambdoid ossicle	present both sides
Post. root of zygoma	slight
Tympanic plate	deliccate
Mastoid process	medium
Digastric fossa	shallow and ridged
Supra-asterionic region	curved
Cranial form	oviod
Postcoronal region	rounded
Parietal foramina	absent
Foramen of Huschke	absent
Auditory torus	slight on right side
Shape of orbits	round
Position of nasion	depressed
Os japonicum	absent
Torus palatinus	absent
Torus maxillaris	absent
Torus mandibularis	absent

Table 3. Long bone measurements (mm).

	left	right
Humerus		
Maximum length	312,5	319,0
Maximum head diameter	-	-
Epicondylar breadth	60,5	60,0
Midpoint circumference	55,0	60,0
Radius		
Maximum length	258,0	264,0
Ulna		
Maximum length	278,0	-
Femur		
Maximum length	452,0	453,0
Bicondylar length	451,01	450,0
Maximum head diameter	44,9	44,5
Trans. diam. (midpoint)	22,5	22,5
Sagit. diam. (midpoint)	28,5	27,5
Tibia		
Maximum length	390,0	388,0
Trans. diam. (nutr. for.)	22,5	21,0
Sagit. diam. (nutr. for.)	34,5	32,5

Dental and general health

A full set of dentition, with the exception of the left upper lateral incisor which was lost post-mortem, is present. In general the tooth wear is mild. No carious lesions are present, although tartar is present on most of the teeth. Enamel hypoplastic lesions, in the form of a single horizontal groove, are present on four of the upper and three of the lower teeth. These kinds of lesions are caused by episodes of acute infections or malnutrition (Goodman & Rose 1990). With the help of the Goodman and Rose formulae, it could be established that these lines

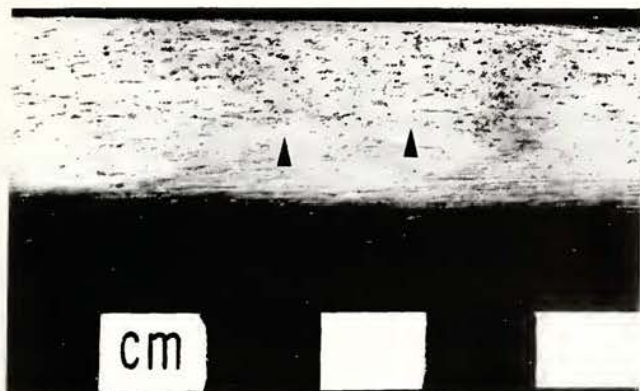


Fig. 10. Subperiosteal bone growth on tibiae which suggests that the young man suffered from chronic infection.

formed between the ages of 2 and 6 years. This is the most common period for these lines to form, since the post-weaning period in childhood is often associated with disease and malnutrition.

Subperiosteal bone growth, indicative of chronic infection, is present on both femora, tibiae, fibulae and around the epiphyses of the upper limbs (Fig. 10). The left fibula has a 'blown-up' appearance. These signs are compatible with a tentative diagnosis of treponemal disease, most probably yaws (Steinbock 1976; Ortner & Putschar 1981). Two small lesions on the skull, one on the left coronal suture and the other on the forehead, may also be due to this disease.

Many other diseases should be considered in the differential diagnosis, such as leprosy, fungal infections, osteomyelitis and tuberculosis. The bilateral distribution of the subperiosteal bone growth as well as the cranial lesions are, however, typical of treponematous disease. The only other archaeological case reported from sub-Saharan Africa with this disease comes from K2, one of the settlements forming part of the Mapungubwe Complex. The latter individual, who was also a young male, was tentatively diagnosed as having yaws (Steyn 1994).

DISCUSSION

The forging of iron in site ZK001 took on formidable proportions at the time when this settlement was abandoned. Sixteen iron tools were excavated in the settlement. Judging the deposit in Kraal 3, the forging of iron may have commenced earlier in this high-status forge than in the low-status iron forge niches.

The smelting of iron ores and the subsequent forging of the iron bloom are treated differently by African metallurgists. Many metal working groups consider the smelting of iron a private matter as this practice was strongly ritualised. Consequently, these activities usually occurred at some distance from the habitational settlements of these communities. The forging of iron, however, is practised by many African metallurgists as a public event (Childs & Killick 1993:325).

This dichotomy between the private, ritualised

smelting of iron and the overt, public forging of iron resulted in different spatial locations for these activities. This spatial division between smelting and forging was also found amongst the Sotho metal workers of Phalaborwa (Van der Merwe & Scully 1971; Pistorius 1989) and also seems to have existed in the Mabyanamathswaana complex. While the forging of iron occurred in the central parts of these settlements where it could have been witnessed by all the inhabitants of these sites, it is at present still unclear where the smelting of magnetite ores took place.

Two types of iron forges were distinguished in site ZK001. While Kraal 3 housed forges which were associated with high-status the common iron forge niches were associated with iron forgers of a lower standing. However, it is not yet clear whether iron forging and political status were interwoven in the Mabyanamathswaana complex. Such an ideology used to exist amongst Iron Age groups in Central Africa. Here, rulers were buried with their anvil/hammerstones which served as symbols and as insignia to these important political figures (De Maret 1985:73). Ruling lineages amongst the metal workers of Phalaborwa also had their iron forge shelters, which were equipped with elaborate furnaces and massive anvil and hammerstones, built on the slopes of hills. These forges are associated with habitational remains which may have some association with the rulers of these settlements (Pistorius 1989).

Three ranges of dates were possible (on the + 1 sigma level of the calibration curve) for the time of death of the individual, namely: AD 1698, AD 1721; AD 1820, AD 1852 and AD 1867, AD 1929. The first range of dates was ruled out on the basis of stratigraphical evidence from the grave and the relatively well preserved remains of the "sesigo". The second range of dates would place the death of the young man during a period of conflict in the Central Transvaal (c. AD 1818-1832) while the first part of the third range fall well within the colonial period of the Transvaal. The latter part of the third range, which corresponds with the turn of the twentieth century and with both calibrated dates, is too recent to be considered seriously. The time period between c. AD 1820-1867 seems, on the basis of stratigraphical and historical evidence as well as the good state of preservation of the "sesigo", to be the most acceptable for the time of death and burial of the young man.

Different burial practices have been described for the Iron Age peoples of South Africa. It is generally assumed that people who were buried in the middle, or on the perimeter of cattle kraals had high social status. Most of the 32 skeletons found in Iron Age sites which were occupied by the Sotho-Tswana were buried in a vertically flexed position (Morris 1992).

When one considers the fact that this individual was buried in the central inner space which used to serve as a cattle kraal, it would appear that this person, despite his youth, had a high status. One can therefore speculate that this young man might have been a member of the family of the ruler of the settlement or that he may have

achieved his status through his craft as an iron smith or, perhaps, through an act of bravery such as being killed in battle. (Not one of the possible diseases which were identified from his skeleton would necessarily have led to his death). There are, however, no signs of trauma to be found on the skeleton.

Iron working in the Mabyanamatsywaana complex have coincided with conflict in this part of the Central Transvaal. This assumption is based on evidence such as the burial of the young man in a "sesigo". These containers were normally stored on stone platforms within the confines of the dwellings ("malapa") and were only buried in cattle kraals during periods of war (Redelinghuys 1968:61). The turn of the nineteenth century in particular coincided with at least one well-known period of conflict in the central Transvaal, namely the "difaqane". It is therefore possible that the young man was buried in a (disused) "sesigo" which was already buried in a kraal of site ZK001.

The large scale forging of iron in the central parts (kraal complexes) of settlements of the Mabyanamatsywaana complex suggests that these communities did not keep stock in these enclosures at the time when these sites were abandoned. These animals, which have been identified as cattle, sheep and goats (I. Plug, pers. comm.), were perhaps kept safely at cattle stations which were located far from these habitational sites. Such a practice, given abundant grazing in the area under normal circumstances, could imply that stock was at the root of the conflict. Consequently, all the stock may have been hidden from the enemy.

Another possibility is that all of the stock may have been lost in conflicts. It seems that the Kgatla and the Kwena of Mabyanamatsywaana participated in many battles at the turn of the nineteenth century. A forty year old Kwena Mògòpa spokesman told Andrew Smith in c. AD 1834 that the Kwena never had any cattle during his lifetime as their cattle had been taken from them during these wars (Breutz 1953:89).

The large range of iron tools which were excavated from different areas in the site indicate that iron manufacture was aimed at local consumption. The large scale of production also suggests that surplus iron tools were manufactured which would have meant that tools were traded, possibly with neighbouring groups such as the Bafokeng, Ndebele and even with chiefdoms such as the Kwena Modimosana and the Pedi further afield in the Transvaal. Two pieces of ivory found on a settlement adjacent to site ZK001 also support a trade hypothesis for the Mabyanamatsywaana complex. The use of iron working tools as funerary goods, however, also suggests that iron working played a significant role in the ideology of the Kgatla-Kwena of the Mabyanamatsywaana complex and that a possible relation between iron forging and political status should be investigated further.

ACKNOWLEDGEMENTS

The authors would like to thank students and assistants from the Departments of Anthropology and Archaeology

and Anatomy at the University of Pretoria who assisted in the excavation of the skeleton. Dr J. Vogel of the CSIR did the radiocarbon dating of the skeleton while Professors M. Henneberg and B.M. Rothschild made valuable comments on the skeleton pathology.

We would particularly like to thank Braam Marais of Liebenberg, Jenkins and Associates (Civil Engineers) of Pretoria who arranged financial assistance for this excavation.

Research during the last three years in the Rustenburg-Pilanesberg-Brits area would also have been impossible without financial assistance from Hein Enslin of Vametco Mine and Pierre Lourens of the Gencor Development Trust.

The photographs of the skeleton, grave and "sesigo" were taken by Marius Loots of the Department of Anatomy of the University of Pretoria. Marius, as so often in the past, also made major contributions to the painstaking recovery and documentation of the skeleton.

REFERENCES

- Bothma, C.V. 1962. Ntshabeleng social structure. Ethnological Publications No. 48. Pretoria: Government Printer.
- Breutz, P.L. 1953. The tribes of Rustenburg and Pilanesberg districts. Pretoria: Government Printer.
- Bruwer, J.P. 1963. Die Bantoe van Suid-Afrika. Johannesburg: Afrikaanse Pers-Boekhandel.
- Casalis, E. 1964. The Basutos. Cape Town: Struik.
- Childs, T.S. & Killick, D. 1993. Indigenous African metallurgy: Nature and Culture. *Annual Review of Anthropology* 22:317-337.
- De Villiers, H. 1968. The skull of the South African Negro. Johannesburg: Witwatersrand University Press.
- De Maret, P. 1985. The smith's myth and the origin of leadership in central Africa. In Haaland, R. & Shinnie, P. (eds) African iron working - ancient and traditional. Oslo: Norwegian University Press.
- Ferembach, D., Schwidetzky I. & Stloukal, M. 1980. Recommendations for age and sex diagnoses of skeletons. *Journal of Human Evolution* 9:517-549.
- Goodman, A. & Rose J.C. 1990. Assessment of systemic physiological perturbations from dental enamel hypoplasias and associated histological structures. *Yearbook of Physical Anthropology* 33:59-110.
- Lundy, J.K. & Feldesman M.R. 1987. Revised equations for estimating living stature from the long bones of the South African Negro. *South African Journal of Science* 83:54-55.
- Maggs, T.M. O'C. 1976. Iron Age communities of the southern Highveld. Pietermaritzburg: Natal Museum.
- Mason, R.J. 1968. Iron Age settlement in the Transvaal and Natal revealed by aerial photography and excavation. *African Studies* 27(4):1-14.
- Mason, R.J. 1986. Origins of black people of Johannesburg and the southern western central Transvaal AD 350-1880. Johannesburg: University of the Witwatersrand.

- McDonald, C.A. 1940. The material culture of the Kwena tribe. Unpublished M.A. thesis: University of South Africa.
- Mönnig, H.O. 1967. The Pedi. Pretoria: Van Schaik.
- Morris, A.G. 1992. The skeletons of contact. Johannesburg: Witwatersrand University Press.
- Ortner, D.J. & Putschar, W.G.J. Identification of pathological conditions in human skeletal remains. Smithsonian Contributions to Anthropology No. 28. Washington: Smithsonian Institute Press.
- Pistorius, J.C.C. 1984. 'n Etno-argeologiese interpretasie van 'n Sotho-Tswana vestigingseenheid op Selonskraal. Unpublished M.A. thesis: University of Pretoria.
- Pistorius, J.C.C. 1989. Die metaalbewerkers van Phalaborwa. Unpublished D.Phil thesis: University of Pretoria.
- Pistorius, J.C.C. 1992. Molokwane: an Iron Age Bakwena village. Early Tswana settlement in the western Transvaal. Johannesburg: Perskor.
- Pistorius, J.C.C. 1994a. 'n Verslag van argeologiese opgrawings op die plaas Zwartkopjes of Roodekopjes (427JQ) in die Britsdistrik van Transvaal. Unpublished report: National Monuments Council. Cape Town.
- Pistorius, J.C.C. 1994b. Molokwane, a seventeenth century Tswana village. South African Journal of Ethnology. 17,2:38-53.
- Pistorius, J.C.C. 1995 (in press). Rathateng and Mabyanamatshwaana: cradles of the Kwena and Kgatla. South African Journal of Ethnology 18(2).
- Pistorius, J.C.C. & Coetzee, F.P. 1993a. 'n Argeologiese impakstudie van die beoogde trajek van Roete K16 in die Britsdistrik van Transvaal. Unpublished report: National Monuments Council. Cape Town.
- Pistorius, J.C.C. & Coetzee, F.P. 1993b. 'n Argeologiese ondersoek van 'n gedeelte van die plaas Elandsrand (570JQ) in die Britsdistrik van Transvaal. Unpublished report: National Monuments Council. Cape Town.
- Redelinghuys, H.J. 1968. 'n Ondersoek na die ekonomiese lewe van die Bakwena ba Mogopa. Unpublished M.A. thesis: University of Pretoria.
- Steinbock, R.T. 1976. Paleopathologic diagnosis and interpretation. Illinois: Charles C. Thomas.
- Steyn, M. 1994. An assessment of the health status and physical characteristics of the prehistoric population from Mapungubwe. Ph.D-thesis: University of the Witwatersrand.
- Taylor, M.O.V. 1984. Southern Transvaal stone-walled sites - a spatial consideration. In Hall, M., Avery, G., Avery, D.M., Wilson, M.L. & Humphreys, A.J.B. (eds): *Frontiers: southern African archaeology today*: 248-251. Oxford: British Archaeological Reports International Series 207.
- Tobias, P.V. 1972. Growth and stature in southern African populations. In Vorster, D.J.M. (ed.): *Human biology of environmental change*. London: International Biological Programme. 96-104.
- Van Der Merwe, N.J. & Scully, R.T.K. 1971. The Phalaborwa story: archaeological and ethnographic investigations of a South African Iron Age group. *World Archaeology*. 3:178-196.
- Walton, J. 1958. African village. Pretoria: Van Schaik.