

SADF EARLY IRON AGE EXCAVATIONS IN THE TUGELA VALLEY

Col D.P. Stoffberg*
and Lt J. Loubser*

Met die argeologiese opgrawings sedert Desember 1982 in die Tugelavallei wat die herwinning en bewaring van kultuur-historiese reste van die vroeër ystertydperk mense (die Proto Swartman) van Suider Afrika behels, het die SA Weermag die eerste keer in sy militêre geskiedenis aktief betrokke geraak by 'n projek van die aard en is daar sodoende geskiedenis gemaak.

Introduction

In 1977 the local store owner at Middeldrift (Ndongondwane), C. Woolmore, retrieved pieces of ceramic sculpture from a ploughed field, which he gave to the Natal Museum in Pietermaritzburg. In 1978 Dr Maggs of the Natal Museum excavated the area associated with the sculptured pieces. He obtained two eight century A.D. radiocarbon dates on charcoal associated with two separate *in situ* stone piles. (Maggs in press). His excavations yielded ceramic, bone and carbonized plant remains indicating that the inhabitants pursued a mixed agricultural subsistence strategy, like those from related Iron Age sites. Maggs felt further excavations were warranted to obtain additional sculptured ceramic pieces to enlarge the pottery sample to provide further evidence of the subsistence strategy, and finally to get a picture of activities in different parts of the site.

With these aims in mind and the shortage of trained archaeologists in KwaZulu, the KwaZulu government approached the SADF (SSO Ethnology) to give assistance. Lieutenant J. Loubser and Private R. Wade started excavations at Ndongondwane in December 1982 which lasted until September 1983. During this period they excavated three separate activity areas.

The Area

The site is located on the cultivated eastern (KwaZulu) bank of the Tugela River where the magisterial districts of Kranskop, Nkandla and Eshowe meet (28 53' 30" S, 31 01' 40" (See fig. 1).

The site is some 200 metres above sea level and falls within the Lower Valley Sub-region of Edwards (1967). In this area the Tugela River has a gentle gradient and flows through countryside with flat undulating topography. The Nkandla heights are some fifteen kilometres to the North-east, while Ntunjambill mountains are some five kilometres to the west. These high lying flanks of the valley are over 1 000 metres above sea level, and differ geologically and ecologically from the low lying Valley Region.

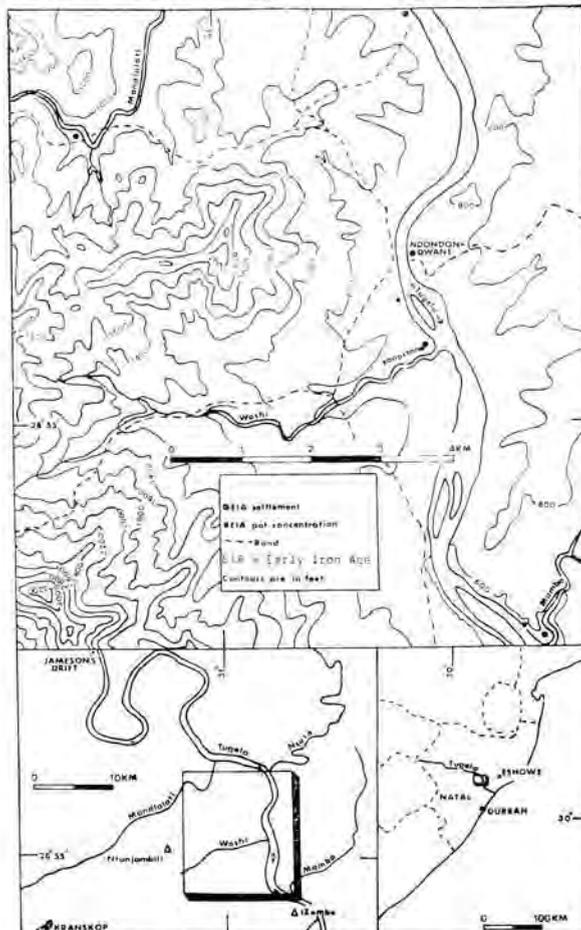


Fig 1. The Ndongondwane (middeldrift) site and its location.

The geology belongs to the Tugela series of the Archaean Complex. It comprises hornblende schists and gneisses traversed by granite veins (Du Toit 1931). Some six kilometres south of Ndongondwane is an intrusive gabbro comprising seams of titaniferous magnetite with a high concentration of cerium, (C Luyt 1976). Two seams are prominent in the form of two hills on the south western banks of the Tugela River known as In-simbene and IleZembe. One band is traceable to the east across the Tugela (Du Toit 1931). A body of white talc in the Tugela schists is visible along the northern banks of the Woshi River about two kilometres south from Ndongondwane (Coetzee 1976). Copper occurs in the exposed syenites along rivers in the high lying Nkandla area (Hammerback 1976).

Rainfall and temperature show marked seasonal variation. Most rainfall occurs in the early summer months between November and January. The mean annual rainfall is 759 millimetres. The relatively low rainfall is the result of the rain-shadow effect of the high flanking ridges of the Tugela Valley. The high daily summer temperatures with a mean daily maxima of over thirty degrees Celsius reduces the effectiveness of the rainfall through high evaporation (Edwards 1967). Light frost occurs in the valley bottoms on cold winter mornings.

Pockets of deep unleached alluvial and colluvial soils occur along river banks and other flat areas. These pockets of alkaline reddish clayey and loamey soils of the Sunvalley – Ferry – Weenen type (Van der Eyk et al 1969) were specifically chosen by Early Iron Age farmers for settlement (Maggs 1980).

The warm and dry scrub and savanna country around Ndongondwane is characterised by Sclerocarya – Acacia Tree Veld of Edwards (1967). The dominant tall tree is Sclerocarya birrea. Chumps of Spiro Stachys africana and especially on the western (Natal) side of the river Boscia albitrunca appear amongst Acacia spp. On sloping ground with its rocky, shallow soils, the community grades into Combretum apiculatum Tree Veld with Euphorba tirucalli and Aloe Spectabilis. Big trees such as Ficus sycamorus occur along river banks. Reedswamp communities occur along stream courses and confluences. The sweet grass understory is suitable for year-round nutritious grazing.

It is clear that the area provided resources for metal-working and mixed farming communities. These are magnetic for iron production, wood for fuel and building, deep soil for the cultivation of drought water, and riverine plants and animals. These can be seen from settlements at the Nsuze-Tugela confluence, the Woshi-Tugela confluence and the Mamba-Tugela confluence.

Local Population

The Ndongondwane area is in KwaZulu where the magisterial districts of Kranskop, Nkandla and Eshowe meet. Chiefs from different ruling lines preside over the various sections of the black population. The excavations took place in the area where the people are under the jurisdiction of chief Zuma. To the south of Zuma is chief Shange and to the north is chief Magwaze. Across the river is chief Bhengu and Ngobane.

Factions under chief Ngobane clashed with those under chief Bhengu early in 1982. During the fighting at least fifty people were killed by rifle fire. Police intervention and the Bhengu superiority in numbers brought an end to the fights just prior to the arrival of the archaeologists.

Chief Zuma has three headmen (izinduna) who serve as intermediaries between the chief and the rest of the local population. Zuma has regular council meetings (ibandla) with headmen Dladla, Jali and Ndzuza when they discuss and decide on matters as diverse as bridewealth and suspicious persons. People from the relevant homestead (imiziz) partake in these lengthy discussions.

As the archaeologists of the Defence Force arrived the local black population received them with great hospitality. At their arrival, twelve people appointed by Chief Zuma, eagerly assisted them in putting up camp.



Local blacks working on the site.
The slogan on their T-shirts "Simunye Bambisana" (We are one and work together) also manages to relate to the digging activities.

The site

The Ndongondwane site extends for some 200 metres down a gentle slope to within fifty metres of the Tugela River and runs parallel to the river for 250 metres (see fig. 2). The size (\pm seven hectares) falls within the range of other Early Iron age settlements in the Tugela Basin beyond. Like other Iron age settlements cultural materials is not found uniformly distributed across the site, but rather occurs in separate clusters surrounded by sterile deposit. Erosion on the site is limited to two gullies on the edge of the floodplain.

An auger was used to locate "hidden" cultural deposits. According to the eleven auger samples and the surface scatter of cultural material the two richest clusters were fourty metres apart –

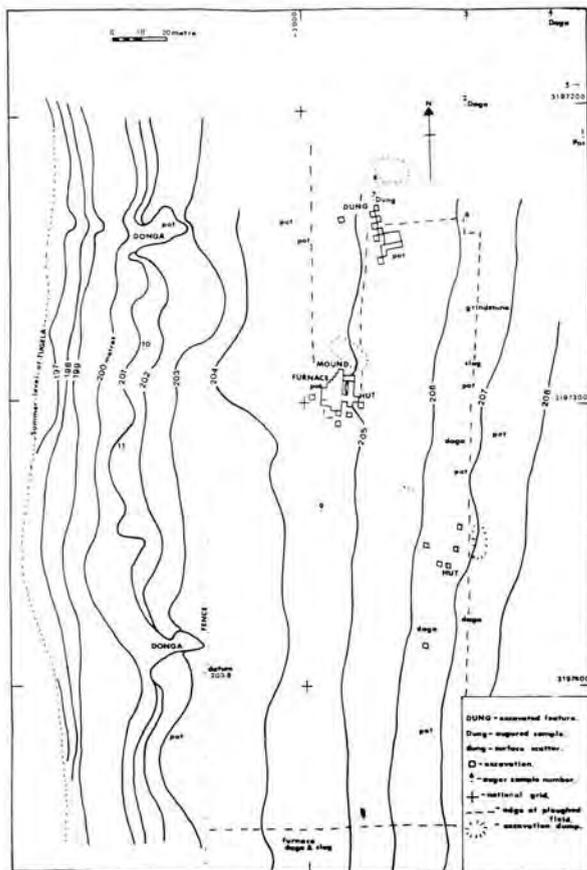


Fig 2. Site location in relation to topography and Tugelariver.

one being the area excavated by Maggs and the other showing traces of dung. Upslope from these two clusters, pottery and daga were found scattered along the slope in a linear fashion.

The excavation

Method and stratigraphy (See fig 3)

We initially concentrated on the area dug by Maggs in order to retrieve further ceramic sculpture and to make more sense of the configuration for the furrows. We then excavated a separate area some forty metres north from this area. We excavated a third area forty metres east and upslope from the other two areas.

Altogether we excavated fifty-eight squares of two metres each. In our excavations we followed Magg's initial grid system. We excavated each of the two metre squares in quarters. Normally we dug the first quarter in arbitrary spits, and the remaining three quarters in natural levels.

Personnel of the KwaZulu Surveying Department surveyed the natural and cultural features on the site. We plotted artefacts and features within the trenches by offset measurements.

The overall stratigraphy of the site consists of two principal layers, with a cultural horizon sandwiched between these two layers:

- (a) Upper soil – red-brown loam varying in thickness from twenty centimetres to fifty centimetres. Ploughing disturbed the upper twenty-five centimetres of deposit. Finds in



Ndongondwane excavation looking south

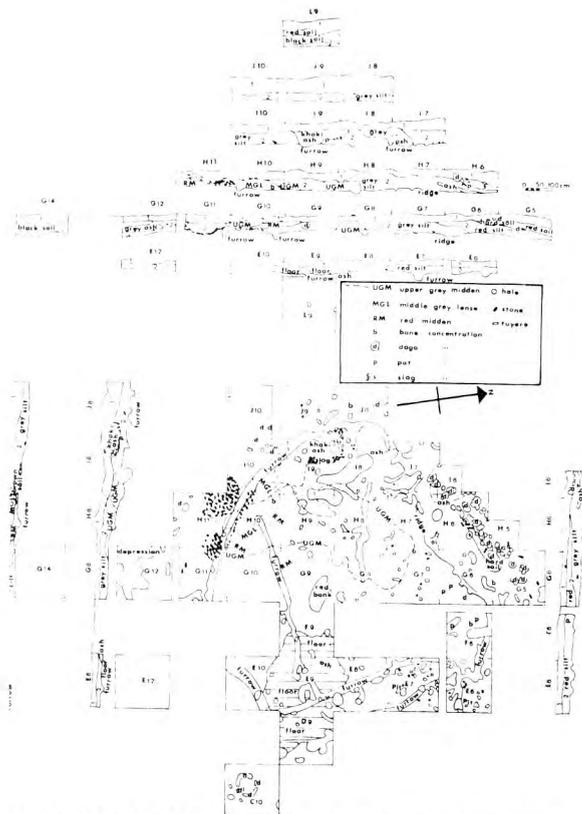


Fig 3. Plan of Ndondondwane Site showing distribution of finds.

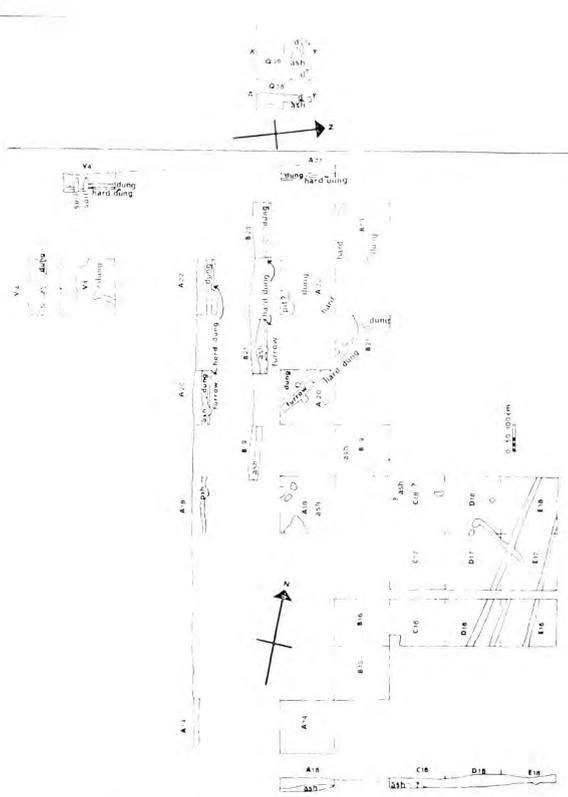


Fig 3(a) Grid plan of Ndondondwane Site.



Ndondondwane excavation looking west over mound area (841000883)

this layer come from the lower disturbed cultural layer.

- (b) Cultural Horizon – silt, ash and dung layers depending on the specific cultural activity in the particular area concerned. The layer can be between ten centimetres and sixty centimetres thick, depending on the intensity of deposition.
- (c) Sub-soil – red-brown hard clayey-loam void of any archaeological material.

We now proceed to discuss features under the heading of the three excavated activity areas.

Features

The mound area

The area excavated by Maggs and where most of the subsequent work was done, is a mound of silt and ash hidden from the surface by an upper soil layer. The mound has a diameter of sixteen metres, as is sixty centimetres above the sterile sub-soil at its thickest. The mound comprises four successive periods resulting from different activities.

The earliest activity is associated with a smooth daga floor most probably that of a hut, directly on top of the sterile sub-soil. The diameter was at least four metres. We retrieved a concentration of pole-impressed daga in the vicinity. Informants identified the impression in the sub-soil in G12 as the source of imbumba, or clay, to build daga walls. Maggs obtained a charcoal sample from the stone pile stratigraphically related to the floor with the following result: Pta-2388 1230 + – 50 BP (720 AD). One metre east of the floor is a ring of softish daga enclosing an area about sixty centimeters in diameter.

After the people used the floor, they erected a palisade. The base of this palisade left furrows and holes in the hard sub-soil. The furrows cross-cut the floor and multiple parallel furrows indicate that the section of the palisade was moved at least once by the inhabitants. The palisade formed a semi-rectangular enclosure some eight meters in diameter. Burrowing animals made some of the furrows, and the majority of the holes (only two holes had daga linings). The palisade must have stood until the abandonment of the mound area as discontinuities in the depositional layers coincided with the line of underlying furrows. A line of stone on top of the grey ash lense followed the furrow along the southern edge of

the enclosure close to where the inhabitants piled some stones. Maggs obtained charcoal associated with the stone pile and grey ash lense, which gave the following result: Pta-2389 1190 + – 50BP (760 AD). Two pits filled with silt were in the vicinity of the eastern furrow. They were sterile apart from rodent bones and teeth.

Both the red midden and the overlying middle ash lense pre dated and were cross-cut by the palisade. Unlike these two ash layers, the upper grey ash midden is limited to the enclosure interior. Although the upper grey ash midden is the most recent of the three overlapping ash layers, it is the first and major ash layer within the enclosure. Here the ash is deposited directly on the hardened sub-soil surface, of the enclosure interior. Ivory in the form of slivers and bangles, were clustered in and around the grey midden. At this stage the mound of ash and silt was well developed.

During the existence of the enclosure the inhabitants of the site continually dumped their pottery on to the mound. Clumps of pottery occurred intermittently along the line of the underlying furrow. A particularly intensive discard of pottery and sculptured ceramics occurred just prior to the iron smelting activities. We found an almost solid layer of broken pottery underlying the slag depression and cluster of dismantled furnace daga.

Iron production marks the final activity on the mound. A forty centimeter deep depression on the western interior of the enclosure had a lining of slag some twenty centimeters thick. The depression was filled with khaki-ash. Slag and pieces of tuyere. It had an oval shape and a maximum diameter of 125 centimeters. There was no slag lining on the southern side of the depression where it joined with the secondary depression. This secondary depression was sixty centimeters deep and was filled with khaki-ash, chunks of slag and bone. The slag-lined depression could have been the base of the furnace, while the secondary depression could have been the rake-hole.

Daga wall blocks, tuyeres and slag from the dismantled furnace lay in a line along the northern slope of the mound parallel to the ridge in the sub-soil that marked the base of the palisade. The furnace debris lay on top of a red silt layer and an earlier grey silt layer. The furnace wall blocks must have been dumped shortly after use, since the top layer of the underlying silt had been

baked into a hard crust by the cooling daga blocks.

The dung area

Burrowing animals brought grey ash and grey dung flakes to the surface in the area excavated by Wade. According to the excavations and augering the dung cluster covered an area roughly fifteen metres in diameter.

A layer of silt between ten centimetre and fifteen centimetre thick lay on top of the sterile sub-soil. A layer of hard grey dung between five centimetres and ten centimetres thick overlay the silt in places, but towards the edges of the dung-cluster the hard dung was directly on top of the subsoil. The base of the pallsade left a furrow in the hard dung. A discontinuity in the in square 4V contained two separate columns each of which still had wood preserved around the edges. The shape of the enclosure was semi-rectangular. A depression in square A22 had an ashy filling and could have been a pit. A layer of loose dung chunks lay on top of the hard dung surface. Towards the south of the dung cluster, the loose grey dung changed into grey ash. To the south of the ash there was only the upper soil layer on top of the hard sterile sub-soil.

The hut area

According to augering we did upslope from the mound and dung areas, pockets of daga extend in a north-south line for about 200 metres. We found no daga in the area below the mound and dung area.

We excavated one of the three areas where scatters of pole-impressed daga and pottery occurred on the surface. The cultural horizon was negligible and was contained within the upper brown soil, about twenty centimetres below the surface. In trench Q36 were the remains of a daga floor, damaged by ploughing. Below the level of the floor was a grey ash lense. In the vicinity of the lense were pottery bone, floor daga, pole-impressed daga and charcoal specks. In trench Q36 we exposed a lense of decomposed daga. Trench Q50 contained a dense concentration of pole-impressed daga lumps but nothing else.

Finds

Pottery

Using a model analysis based on variation in three dimensions viz vessel profile, layout and



National Servicemen Archaeologists, Lt Loubser and Pte Wade discuss an excavation in the hut area

decoration, 192 reconstructable vessels could be classified.

Profile modes were based on the number of inflection points. Profile affiliate sets were based on variation in the form of the inflection points. Layout modes were based on the relative position of decoration on a vessel. Decoration modes were based on the decoration motif.

Decoration affiliate sets were based on the variation in the expression of the motif. The intersection between the three dimensions produced classes while the intersection between affiliate sets produced sub-classes. The pottery collection contained seven shape modes, twelve shape affiliate sets, eighteen layout modes, eleven decoration modes and twenty decoration affiliate sets. The intersection of these modes and affiliate sets produced thirtyone classes and fortythree sub-classes.

The vessels retrieved comprised everted neck jars, straight neck jars, neckless jar, inturned bowls, inturned carinated bowls and open bowls (See fig. 4). The most jars are decorated with one or more of the following decoration impressions: unitary bond textured, pendant ladders, pendant

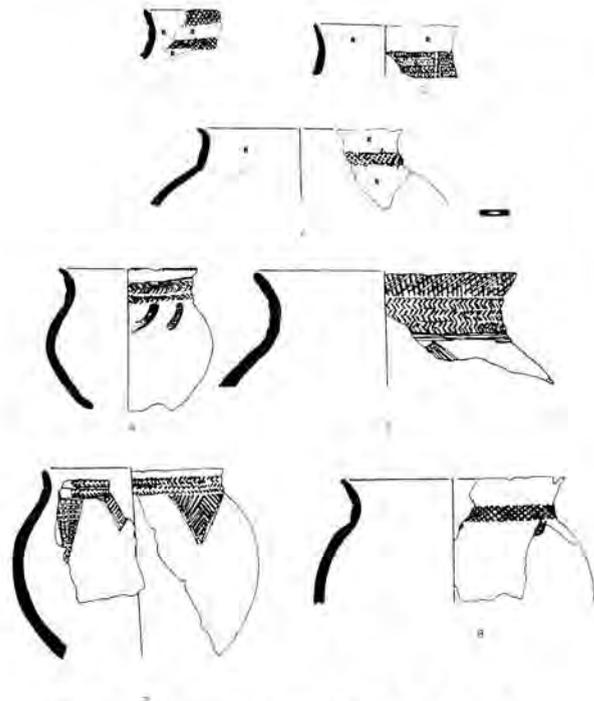


Fig 4. Decorated Pots: Classes 1, 2, 3, 4, 5, 7 & 8.

triangles, herringbone pendant quadrilateral and multiple textured bond, applique bosses, alternating triangles and three linked triangular appliques (See fig. 5).

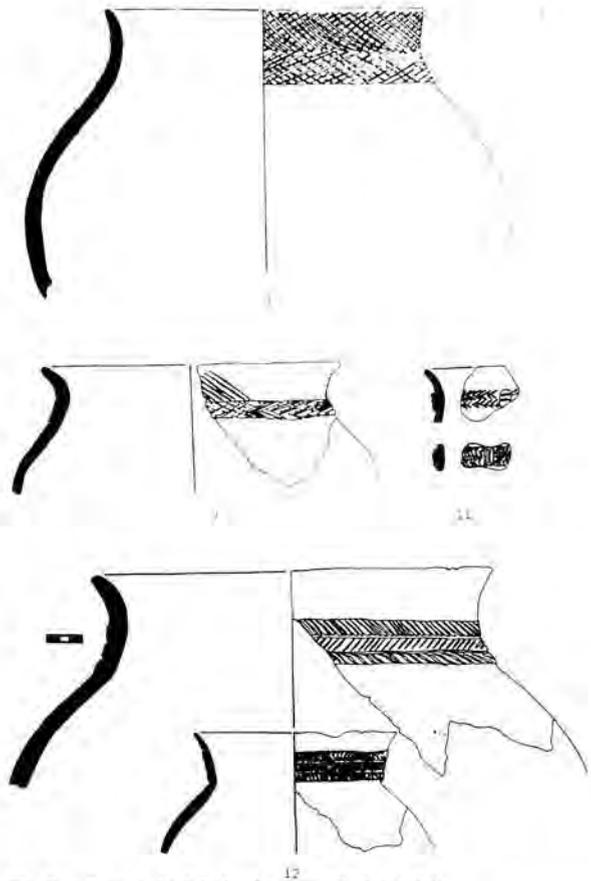
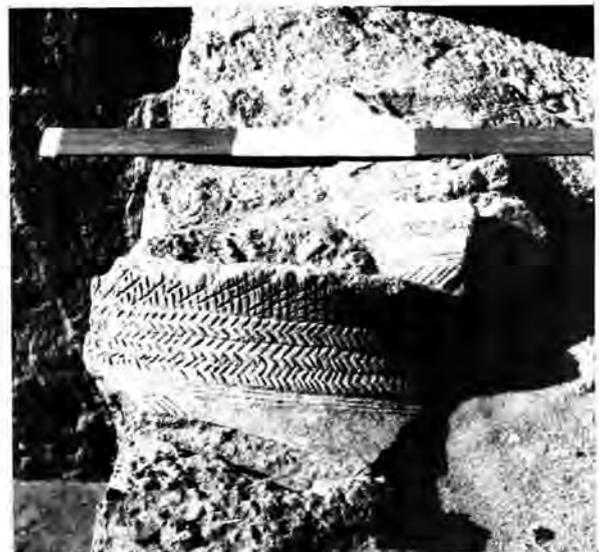


Fig 5. Decorated Pots: Classes 9, 11 & 12.



Pot sherds with typical Early Iron Age decoration motifs – furnace area (841000882)

Hollow pottery heads (Masks)

Modelled pottery fragments from at least four hollow heads were mostly confined to two separate clusters underlying or mixed amongst the furnace debris. Head pieces were not exclusively confined to these clusters though but also occurred along the outer margins of the palisade, and one sherd belonging to the big head, came

from the ash in the dung area. The heads were different sizes and varies in shape. Although non of the heads were complete, we were able to ascribe at least four different pottery features to the different parts of the head (See fig. 6)

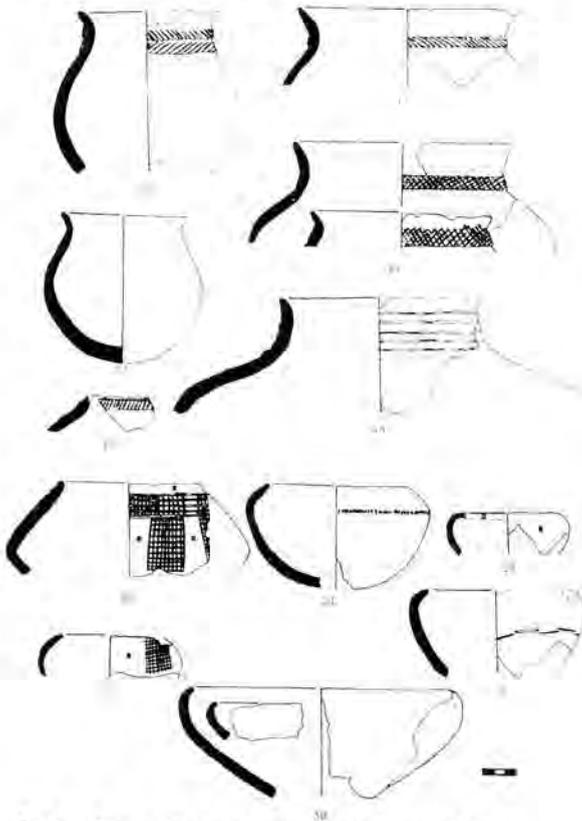


Fig 6. Decorated and undecorated pots of bowls: Classes 12, 13, 14, 15, 18, 21, 23, 25 & 30.

- (a) The neck fragments represented at least two heads. A large head has an averted neck with three plain applique bands in the neck running parallel to the rim. Applique bosses are arranged along the upper convex part of the neck, where it merges into the actual neck. A shred from a smaller head has two plain applique bands, one which terminated in a boss, and one spaced applique boss. Other probable neck shreds from the big head and smaller heads occur only in the form of rims, bands and bosses. Only in two instances have the applique bands been incised.
- (b) The beak fragments represented at least four heads. Three fragments have a broken row of teeth, and five are toothless. Two toothless beaks are pointed. Of the three beaks with teeth one has a row of five broken teeth; the second has a row of ten broken teeth, and the third has one tooth. None of the seven loose teeth found, fit into the beaks, although they have the same diameter as the individual broken teeth, forming the rows. The dor-

sal side of the toothless beak fragment has a cross-hatched motif. A round hole perforated the beak. Another toothless beak fragment has a row of round appliques running diagonally inward from the side of the beak front.

- (c) The eye fragments represented at least three heads. There are four individual eyes. Three are roughly in the same size and one is smaller. The eyes are bulging and had pierced eyeballs.
- (d) The nose fragments represented at least two heads. The two perforations in each of the noses probably represent nostrils. Both noses have appliques on top; the one in the form of a band and the other in the form of knobs.

We could not ascribe four pottery pieces to any part of the heads with certainty:

- (a) An ochre burnished fragment with two broken legs bearing an arc surmounted by three spikes which could be from the top of the head.
- (b) A shred with a twisted and sloping rim and a carination which probably comes from a part of the head where features like beaks were attached.
- (c) A shred shaped into a funnel had a snout-like appearance.
- (d) A shred with a globular protrusion at one end and a small oval hole in a depression could be part of a small hollow head.

Solid pottery figurines

Four figurines represent humans, and six represent legs (fig. 7):

- (a) A female body without arms or head and with legs and breast broken off. Buttocks and navel are pronounced.
- (b) A body with stylized head and mouth. A double row of punctates runs down the front length of the body. An arm or breast protrudes from the side.
- (c) A human head with ears and nose roughly indicated.
- (d) A human head with two bands of punctates running horizontally outwards from a stylized mouth and nose respectively.
- (e) All six legs are round in section and flat at the base.

Incised pottery cylinders

Three fragments come from cylindrically shaped objects, possibly figurines:

- (a) Two fragments are ochre burnished with herring bone incision and applied boss.
- (b) One fragment has an incised line running down it's length with short incisions running alongside this incised line.

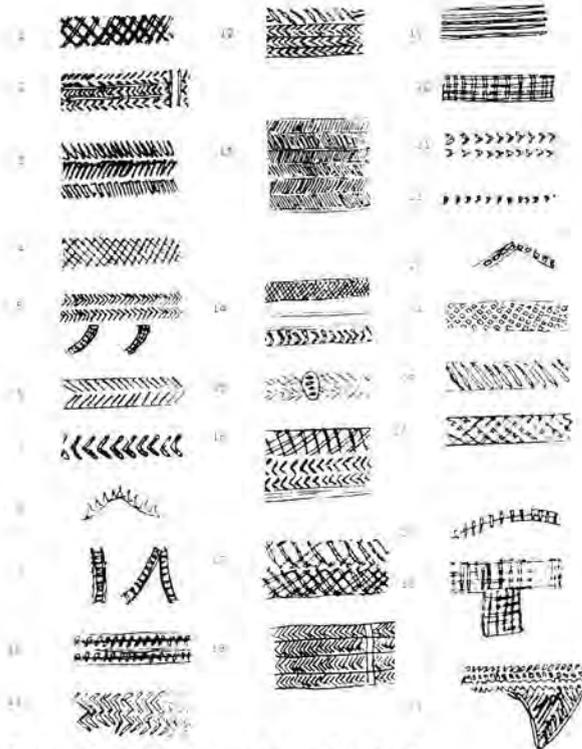


Fig 7. Ndongandwane decoration motifs.

Pottery horns

Ten solid horns were distributed along the western interior edge of the enclosure and include five cattle-horns, four antelope-like horns and an unidentifiable horn which has two deep grooves running down it's length.

Pottery coils

Three lengths of pottery coils came from the dung area.

Miniature pots

Eight miniature jars came from the mound area: Four are plain, one has a band of punctates with a punctate pendant, one has a band of punctates with a separate spaced herring-bone motif, one has a spaced herring-bone motif only and one has a double band of incisions.

Perforated bowl

An open bowl with straight sides and convex base which has at least two oblong perforations on the lower sides.

Other pottery

Six shreds have ground edges. Two of these are circular with the ground edge going right round. Four shreds one of which has ochre burnish, have the ground edge on one side only.

A shred which has a long groove formed by abrasion, either as a result of shaft straightening, shell-bead manufacture, or for shaping bone or iron points.

Pottery fragments

- (a) Sherds from thirteen vessels with incomplete profiles and/or layouts can be placed into more than one of the existing classes. Four of these sherds have applique baboon heads with incised eyes and nose bridges. Although the pronounced eyebrows and mouths were damaged they all share a similar ape-like feature (Fig. 8) an oblong spaced ladder motif was placed between two of the heads. It is probable that these sherds belong to class 5.
- (b) An averted neck jar with pendant textured crocodile applique belonging probable to class 7 came from the mound area (Fig 8). The tail and three legs of the reptile are missing.

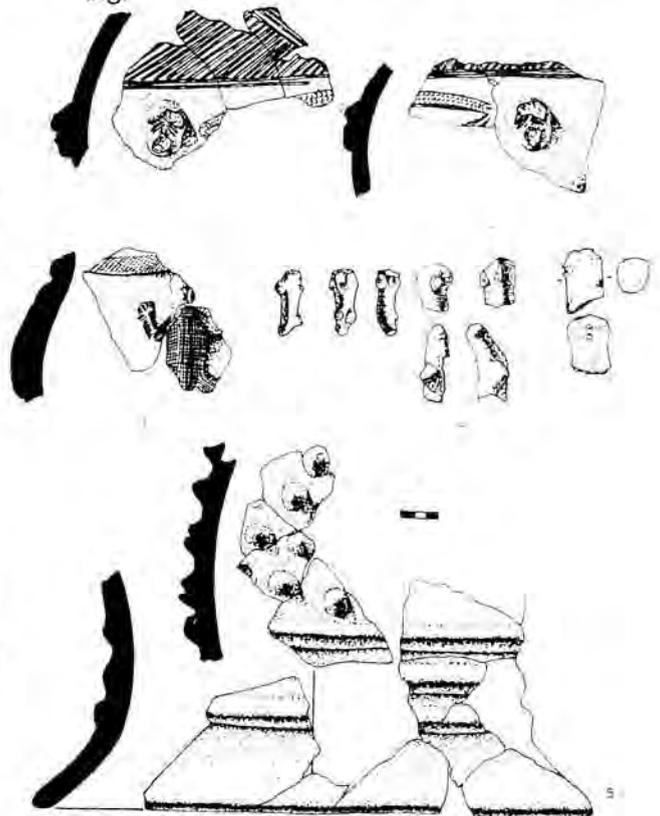
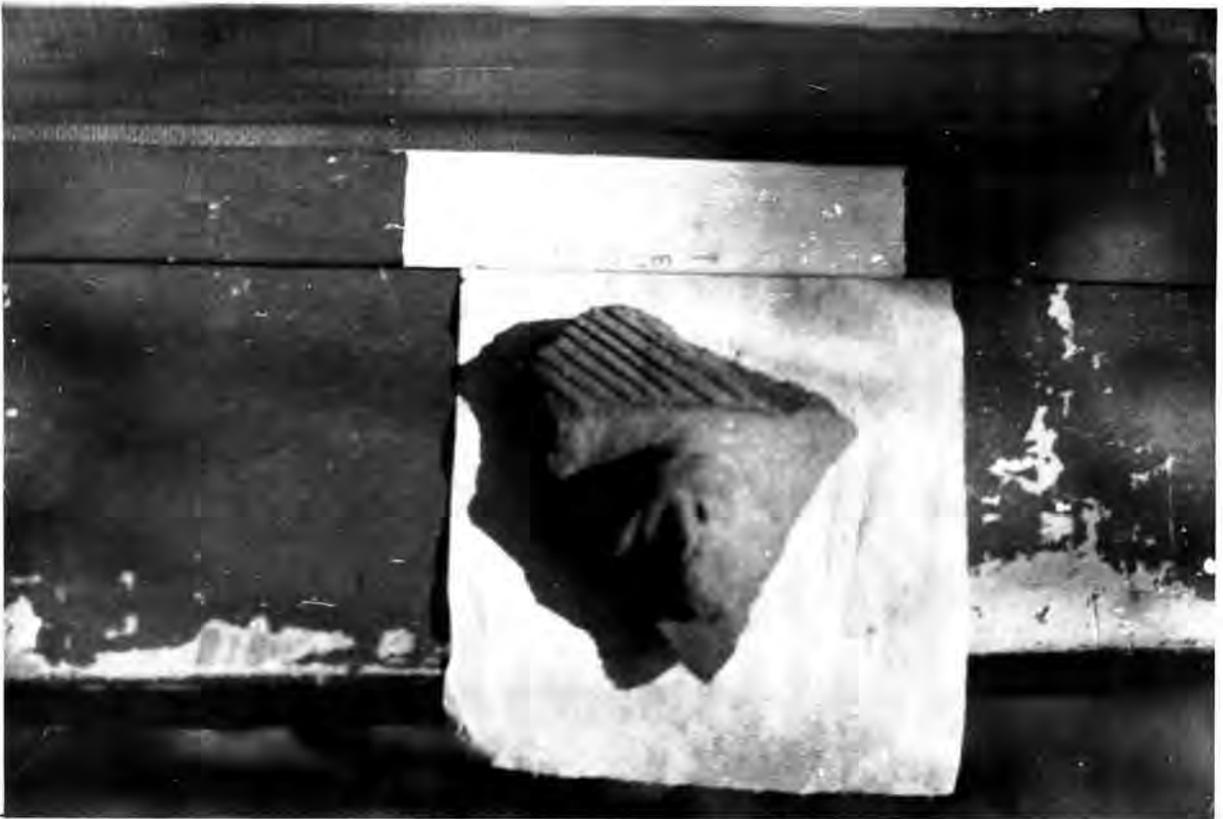


Fig 8. Pottery fragments: nos. 1 & 2 with applique baboon heads; no. 3, crocodile applique. Pottery figurines representing humans, no. 4. Hollow head pottery fragments, no. 5.



Pottery sherd with applique baboon head-mound area

Wall daga

- (a) Fragments of wall daga have parallel impressed rows of reed, pole and thatch, and diagonal impressions of string. Most fragments have smoothed edges either on the concave or the convex side. The daga hut wall fragments were on the average twelve centimetres thick and 150 000 cubic centimetres of daga came from the mound area while 3 000 cubic centimetres came from the hut area.
- (b) Assuming all the excavated wall daga in the mound area came from the only hut in the mound area and knowing that the hut had a diameter of roughly four metres, and hence a circumference of roughly twelve metres, the wall height could not have exceeded eleven centimetres: (wall height = $150\,000 \text{ c.c.} / (12\text{cm} \times 12 \text{ m})$)

Furnace daga

- (a) According to the scatters of furnace daga, there were at least three furnaces operating in different parts of the site, either concurrently or sequentially.
- (b) The brick-like blocks from the furnace debris heap have a lump texture with smooth interior surfaces striated by deep finger impres-

sions. A crust of glassy slag is attached to the interior side of most blocks. The slag is thickest near the tuyere entry ports.

- (c) We reconstructed the furnace after numbering the *in situ* daga blocks. Two clusters of moulded tuyere entry port blocks came from opposite sides of the furnace rubble heap. Blocks from within each cluster joined firmly, but did not fit blocks from the opposite cluster. This indicates the presence of two entry holes. Each entry port had an exterior diameter of nine centimetres, going out wider towards an internal diameter of ten centimetres. Two blocks in the vicinity of one of the tuyere entry ports had the interior slag lining on the convex side. This indicates that the entry port area had a spout-like shape.
- (d) Knowing that all the excavated furnace daga in the mound area came from the arc of individual blocks that the furnace had a maximum diameter of one metre and hence a circumference of roughly three metres, the furnace wall height would be slightly over a metre above ground level: (wall height = $250\,000 \text{ cc} / (7\text{cm} \times 3\text{m})$).

Slag

- (a) Some 300 000 cubic centimetres of slag



Furnace debris – furnace area (841000878)

came from the mound. The lumps of slag comprise mainly two phases: oxide (Fe_3O_4) ore particulars which remained unreduced and/or undissolved while in the furnace and dendrites of oxide indicating a liquid state. The ore is magnetic.

- (b) An Ex-ray fluorescent test of the slag shows the presence of magnetite, vanadium and titanium.

Pottery crucible

A small everted neck jar which has glassy slag attached to the interior.

Tuyere

- (a) Although we could not establish the length of individual tuyere we took measurements of three flared distal ends and of four vitrified and melted proximal ends:

mean distal internal diameter 7,16 centimetres

mean distal wall thickness 1,8 centimetres

mean proximal internal diameter 3,6 centimetres

mean proximal wall thickness 1,8 centimetres

- (b) The fragment interiors had oxidized to a red colour and proximal fragments have interior

slag run-back. These pre-heating features suggest that most of the tuyere length lay in the hot charcoal bed.

Metal objects

- (a) Four iron rings came from amongst the furnace debris in square G 5: two are circular in section, while the other two are square in section.
- (b) Three short sections of copper wire came from amongst the upper grey ash layer.

Stone

- (a) Four upper grindstones came from the site, two from the dung area, one from the hut area and one from the mound. All except one, were well used and have an approximately cuboid shape with curved facets.
- (b) Two lower grindstones are broken but are sufficient to show the well-worn elliptical hollows about six centimetres wide and two centimetres deep.
- (c) Two river pebbles could have been hammerstones. They have small and shallow depressions on their flat sides. One pebble has one depression on one side only, while the

other has two deep depressions on one side and one depression on the other side.

- (d) A fragment of a talc schist vessel and a small talc schist disc with a perforation in the middle, both came from the mound.
- (e) A polished oblong stone bead came from the mound.

Glass

Two small glass beads and a cut glass ornament came from the surface of the mound area.

Fauna

- (a) Among the domestic animals which were positively identified are cattle, sheep, goat, dog and chicken, while the non-domesticates are hippo, crocodile and barbel. Coastal contact is indicated by the presence of cowry and limpet shells.
- (b) Link shaft points, bone needles and finely carved bone pendants came from the mound area.
- (c) Thin ivory bracelets and ivory chip are concentrated within the enclosure palisade of the mound area.
- (d) Ostrich eggshell beads and landsnail beads were scattered all over the settlement.

Flora

We recovered carbonized seed husks, by flotation, from trench 17, identified by Maggs (in press) as Bullrush millet and Pennisetum, which was also discovered at Silver Leaves (Klapwijk 1973) and at Magogo (Maggs and Ward 1984).

Human remains

Fragments of one or more human skulls came from amongst the furnace debris.

Discussion

The pottery from the three excavated areas at Ndondondwane belong to one assemblage. The assemblage contains everted neck jars and inturned bowls common at the seventh century Msuluzi confluence settlement (Maggs 1980) and at Magogo and Mhlopeni (Maggs 1982). The pottery has close stylistic links with assemblages from the Lydenburg area in the Transvaal (Evers 1982). Colouring on vessels and the predominance of decoration in the jar necks at Ndo-

ndondwane indicates that by the eighth century a slight stylistic shift away from the Msuluzi material had occurred.

The settlement location, surface layout, and size of Ndondondwane is diagnostic of other Early Iron Age settlement in Southern Africa. We located two new features at Ndondondwane not previously found in Natal; dung from a cattle byre and fragments from at least four hollow anthropomorphic ceramic heads.

The byre was separate from the hut area and an enclosure area associated with a mound containing traces of ivory ornament manufacture and iron production. Both the dung enclosure and the enclosure associated with the mound had semi-rectangular shapes. Vogel recorded a similar shape for huts at Kumadzulo (Vogel 1971) in Zambia. It could be that a semi-rectangular, rather than a round shape, was a fashionable building structure during the Early Iron Age.

The hollow head fragments are the first found since the discovery of the Lydenburg heads in 1962. The pieces came from the mound slope on the outer fringes of the enclosure associated with ivory working and iron-production. All the sculptured ceramic pieces came from the mound area and the dung area. None came from the deposits related to the hut floors. This distribution complies with the argument that sculptured ceramics were used in confined areas within settlements as initiation objects (Inskeep and Maggs 1975, Evers 1982).

The ore used in the production of iron came from the vanadiferous magnetite outcrops six kilometres south of Ndondondwane. The people dismantled the furnace directly after use. This practice seems to have been followed throughout the Early Iron Age of Africa. The technique of furnace construction was similar to Early Iron Age furnaces excavated in Zimbabwe (Prendergast 1983) although there are minor variations in features.

The huts must have had either conical or beehive shapes with low daga walls around the base. At Ndondondwane the huts were confined to the upper part of the settlement above the cattle byre and the mound.

The earliest remains of domestic dog and chicken in Natal came from Ndondondwane. The main sources of meat were cattle and sheep. Hippo, crocodile and fish bone from the mound

and dung areas indicate that the people relied on the river for at least a portion of their diet. The presence of lower and upper grindstones indicates that in addition to meat the inhabitants consumed cultivated crops.

Other riverside settlements in the vicinity of Ndongdwane contain similar material cultural remains to Ndongdwane. These include pottery, slag, daga lower and upper grindstones, soapstone, shell disc beads and at least two ash concentrations, one or more of which contain dung. Although all these settlements were self-sufficient, some activities were more accentuated than others at any particular settlement depending on the distance between settlement and resources. The settlement at Mamba Confluence is adjacent to the magnetite outcrop and has linear mounds of surface remains visible on the surface. The settlement at Woshi Confluence is near the prominent talc schist band and has worked soapstone pieces scattered all over the site. It could be that Ndongdwane with all the worked ivory fragments was situated in prime elephant country. This hypothesis can be checked by excavating other related settlements in the valley.

Conclusion

At present an excavation has been started between the Tugela and Woshi confluence which promises to throw more light on the EIA era of this area.

The nature of Archaeological fieldwork necessitated that the National Service Men working on the sites got closely involved with the ethnohistory and the people and they managed to establish extensive and positive contacts with the local population.

Acknowledgements

We are most grateful to the KwaZulu Government and their unfailing support to make this project possible.

Thanks are due to the following: Dr Tim Maggs of the Natal Museum for his valuable advice, Mrs

E.A. Voigt of the Transvaal Museum for the faunal analysis, Dr C.J. Vogel of the Council for Scientific and Industrial Research for the radio carbon dates, Mr Ndlovu who gave permission to do excavation on his property, Chief Zuma who appointed people to work on the site, and Citizen Force members Lt A. van Jaarsveld, Lt J. Booyens for their help on the site and Lt S. Miller for doing the surveying of Ndongdwane excavations.

* Col D.P. Stoffberg DRS PHIL, TED is SSO Ethnology and attached to the Military Information Bureau of the SADF. Lt J. Loubser MA, ex National Serviceman is busy with his Doctor's degree in Archaeology.

References

1. Coetzee, C.B. ed: Mineral resources of the Republic of South Africa, Fifth edition. Pretoria Geological Survey (including articles by Coetzee, Hammerbeck and Luyf). 1976.
2. Du Toit, A.L.: The geology of the country surrounding Nkandla, Natal. Pretoria Geological Survey, 1931.
3. Edwards, D.: A plant ecological survey of the Tugela Basin. Pietermaritzburg; Natal Town and Regional Planning Commission, 1967.
4. Evers, T.M.: Iron Age research in the eastern Transvaal, South Africa, *Curr. Anthropol* 14; pp 487-488, 1973.
5. Evers, T.M.: Recent Iron Age research in the eastern Transvaal, South Africa. *S. Afr. archaeol. Bull.* 30: pp 71-83, 1975.
6. Evers, T.M.: Klingbell Early Iron Age sites, Lydenburg, eastern Transvaal, South Africa. *S. Afr. archaeol. Bull.* 35: pp 46-57, 1980.
7. Inskip, R.R. and Maggs, T.M.O'c: Unique art objects in the Iron Age of Transvaal. *S. Afr. archaeol. Bull.* 30: pp 114-138, 1975.
8. Maggs, T.M. O'c: Msuluzi Confluence: a seventh century Early Iron Age site on the Tugela River. *Ann. Natal Mus.*, Vol 24(1): pp 111-145., 1980b.
9. Maggs, T.M. O'c: Mzonjani and the beginning of the Iron Age in Natal. *Ann Natal Mus.* Vol 24(a): pp 71-96, 1980.
10. Prendergast, M.D.: Early Iron Age furnaces at Surtic Farm, near Mazowe, Zimbabwe. *S. Afr. Archaeol. Bull.* 38: pp 31-32, 1983.
11. Van der Eyk, J.J., Macricar, C.N. and De Villiers, I.M.: Soils of the Tugela Basin. Pietermaritzburg Natal Town and Regional Planning Commission, 1969.