

## APPENDIX

**The faunal assemblage from the Early Iron Age site of Mamba 1  
in the Thukela Valley, Natal**

by

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## INTRODUCTION

The excavation of a number of Early Iron Age sites during a regional survey of a section of the lower Thukela River Valley between 1978 and 1986 yielded excellent faunal samples. Three of the assemblages have been submitted to one of the authors (Voigt) for analysis. The present report contains the main faunal information extracted from the assemblage excavated at Mamba 1 and should be read in conjunction with the archaeological report to which this is appended.

The detailed information is to be incorporated into a larger study relating to all three sites. The method of analysis was similar to that used for other Natal Iron Age sites (eg. Voigt 1984) except that the taphonomy of the collection was not taken into consideration. Detailed information and records of the collections are housed at the McGregor Museum, Kimberley and the collections themselves are housed at the KwaZulu Cultural Museum at Ulundi.

## MAMBA 1

There were two phases of excavation on this very interesting site. The interest of the site lies not only in the early dates obtained for the occupation, but also in the specialised nature of the activities which took place there, for example the extensive smelting operations. The faunal sample is small and probably biased as it consisted almost solely of material regarded by the first excavator, R. Wade, as being identifiable (L. van Schalkwyk, pers. comm.). Nevertheless it is interesting because it related to four distinct activity areas as identified by Van Schalkwyk. The analysed assemblage is listed in Table 1 – the low proportion of unidentifiable material is almost certainly an artefact of sampling.

## The faunal sample

*Area II (AII)*

The excavation in this area was into an ashy soil, rich in cultural material and bone, which is assumed to be a dump area for domestic rubbish. Charcoal and bone samples gave two dates of AD 774 and AD 670 (Van Schalkwyk 1994 – this paper).

Cattle remains outnumbered ovicaprine remains in a ratio of 2:1. At least three individuals of *Ovis aries* were present, representing one male, one female and a juvenile. No bones identified as being from *Capra hircus* were present.

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A well-preserved cattle horncore of Nguni (Sanga) type was found as well as a major portion of a poll which suggested an Afrikaner-type profile. The presence of both breeds on a single site has been noted previously on other Iron Age sites (Voigt 1983).

TABLE 1  
Mamba I – Analysed bone sample (OVI – furnace area)

Description	Area II	Area IV	Area VII	OVI	Total
<b>Domesticates</b>					
Bovid teeth	101	10	77	300	488
Ovicaprine skeletal parts	48	5	61	46	160
<i>Bos taurus</i> skeletal parts	94	9	88	124	315
<i>Canis familiaris</i>	8	0	3	6	17
<b>Total domesticates</b>	<b>251</b>	<b>24</b>	<b>229</b>	<b>476</b>	<b>980</b>
<b>Non-domesticates</b>					
Bovids	12	7	25	6	50
<b>Total bovids</b>	<b>263</b>	<b>31</b>	<b>254</b>	<b>482</b>	<b>1 030</b>
Other vertebrates	19	3	2	14	38
Invertebrates	25	13	12	22	72
<b>Total</b>	<b>307</b>	<b>47</b>	<b>268</b>	<b>518</b>	<b>1 140</b>
Miscellaneous skeletal parts	39	4	26	135	204
Bone flakes	22	2	14	12	50
<b>Total sample</b>	<b>368</b>	<b>53</b>	<b>308</b>	<b>665</b>	<b>1 394</b>

This excavation produced the widest range of species (Table 2). The bovid species indicate the proximity of a wooded environment as do the felids, while the water mongoose would have been caught on or near the river bank. The presence of carnivores may suggest hunting for pelts; the occurrence of felids in three of the four assemblages is an interesting aspect of the collection. The presence of domestic dog is also of interest; as domestic dog is present at Wosi as well, it is clear that Man's best friend was well established on the Early Iron Age settlements in the Thukela Valley.

#### *Area IV (AIV)*

This area was a series of trenches and test pits in a deposit which included phytoliths and therefore probably indicates the existence of a stock enclosure, the level of fragmentation in the phytoliths suggesting a cattle enclosure (Huffman 1993). The excavation has been dated to AD 774 (Van Schalkwyk 1994, this paper).

Therefore it is of interest to us that this area has the lowest bone density. Cattle remains are slightly more common than ovicaprine remains. The presence of mountain reedbeek bones is again an indicator of a relatively closed, rugged habitat and a felid is again present.

The low bone density could relate to the function of the area in two ways: either the discarding of bones in the enclosure was avoided, or those that were discarded were so heavily fragmented that they did not survive. Personal observations on

TABLE 2  
Mamba I – Composite species list. Number of juveniles in parenthesis.

Animal Group/Species	Provenance								Total NISP
	Area II		Area IV		Area VII		Furnace I		
	MNI	NISP	MNI	NISP	MNI	NISP	MNI	NISP	
<b>Domestic Mammals</b>									
<i>Canis familiaris</i> (dog)	2	8	0	0	1	3	3	6	17
<i>Bos taurus</i> (cattle)	20(7)	163	5(2)	15	12(6)	135	28(10)	348	646
<i>Ovis aries</i> (sheep)	4(1)	16	1	2	5	27	2 (1)	6	51
<i>Capra hircus</i> (goat)	0	0	0	0	1	1	0	0	1
Ovicaprines	14(6)	64	1	7	10(5)	63	13 (5)	116	250
Total domestic mammals	40	251	7	24	29	229	46	476	980
<b>Wild species</b>									
<b>Mammals</b>									
<i>Sylvicapra grimmia</i> (common duiker)	2	8	0	0	2	24	1	6	38
<i>Tragelaphus scriptus</i> (bushbuck)	1	1	0	0	0	0	0	0	1
<i>Redunca fulvorufila</i> (mountain reedbuck)	0	0	1	6	1	1	0	0	7
<i>Aepyceros melampus</i> (impala)	1	1	0	0	0	0	0	0	1
<i>Kobus ellipsiprymnus</i> (water buck)	1	1	0	0	0	0	0	0	1
Bovid size class II (medium)	0	0	1	1	0	0	0	0	1
Bovid size class III (large)	1	1	0	0	0	0	0	0	1
<i>Lepus/Pronolagus</i> (hare)	0	0	0	0	0	0	1	1	1
Small rodents	1	7	0	0	1	1	1	3	11
<i>Felis caracal/F. serval</i> (caracal/serval)	1	1	0	0	0	0	1	2	3
<i>Felis silvestris</i> (wild cat)	1	1	1	1	0	0	1	3	5
<i>Canis mesomelas</i> (black-backed jackal)	0	0	1	1	0	0	0	0	1
<i>Atilax paludinosus</i> (water mongoose)	1	1	0	0	0	0	0	0	1
<i>Loxodonta africana</i> (African elephant)	0	0	0	0	0	0	1	1	1
<i>Hippopotamus amphibius</i> (hippopotamus)	1	5	1	1	0	0	1	4	10
<b>Reptiles</b>									
<i>Varanus</i> sp. (monitor lizard)	1	1	0	0	0	0	0	0	1
<b>Fish</b>									
<i>Clarias</i> sp. (catfish)	0	0	0	0	1	1	0	0	1
<b>Marine molluscs</b>									
<i>Turbo cidaris</i>	1	1	0	0	0	0	0	0	1
<i>Nerita albicilla</i>	0	0	0	0	1	1	0	0	1
<i>Perna perna</i> (brown mussel)	1	2	0	0	3	7	1	1	9
cf. <i>Trachycardium flavum</i>	0	0	0	0	1	1	0	0	1
<b>Freshwater molluscs</b>									
<i>Unio caffer</i>	2	4	0	0	0	0	0	0	4
<b>Land snails</b>									
<i>Trachycystis</i> sp.	0	0	1	1	2	2	1	1	4
<i>Achatina immaculata</i> (giant land snail)	9	15	0	0	1	1	6	14	30
<i>Metachatina kraussi</i>	3	3	0	0	0	0	2	3	6
<i>Achatina/Metachatina</i>	0	0	1	12	0	0	1	3	15
Total wild species	28	53	6	23	13	39	18	42	156
Total sample of identified specimens	68	304	13	47	42	268	64	518	1137

deserted village sites has shown that cattle bones are discarded in stock enclosures, but are more common on midden areas. An example of extensive fragmentation of cattle bones within a stock enclosure was seen at Ondini, when all that remained of an adult ox eaten in the *isibaya* during the opening celebrations of the complex was a scatter of a few dozen burnt bone fragments less than 5 cm long. Huffman (1993: 226) makes a similar observation at Broederstroom and quotes ethnographic evidence to support the interpretation in terms of ritualistic fragmentation in a kraal area.

*Test Trench 3 (TT3)*

Very little bone material was recovered from the cattle enclosure deposits.

*Area VII (AVII)*

This area exposed a thin clay floor and the remains of a screened area. The assemblage is dominated by domesticated bovids, with cattle remains being in the majority. A third of the cattle and of the ovicaprine remains are teeth. Both *Capra hircus* and *Ovis aries* were identified.

The species list from this area includes a medium-sized domestic dog, a mountain reedbuck and an isolated fish. Parts of at least two individuals of grey duiker attest to hunting, while the isolated catfish bone attests to fishing activities. This is the only assemblage lacking carnivore remains.

*Furnace 1 (OVI)*

This excavation revealed the debris from iron-smelting; bone collagen produced a relatively late date of AD 905 for the debris (Van Schalkwyk *op cit*). However, it is regarded as being contemporary with the other features.

TABLE 3

Mamba I – Age at death of cattle and ovicaprines on the basis of tooth eruption and tooth wear.

Species and age class	Area II	Area IV	Area VII	OVI	Total MNI	%
<i>Bos taurus</i> (cattle)						
Immature						
I : Less than 6 months	2	0	1	2	5	8.60
II : 6–15 months	2	0	1	3	6	10.40
III : 15–18 months	2	0	2	6	10	17.20
IV : 18–24 months	1	2	2	5	10	17.20
Mature						
V : 24–30 months	1	1	2	4	8	13.80
VI : 30–42 months	3	1	2	3	9	15.50
VII : 42 months plus	3	0	1	0	4	6.90
VIII : Mature	1	0	1	1	3	5.20
IX : Teeth in advanced wear	2	0	0	1	3	5.20
Total	17	4	12	25	58	100.00
Ovicaprines						
Immature						
I : Less than 3 months	3	0	1	2	6	18.20
II : 3–10 months	1	0	2	2	5	15.10
III : 10–16 months	2	0	2	2	6	18.20
Mature						
IV : 16–30 months	1	0	2	3	6	18.20
V : 30–60 months	2	0	2	2	6	18.20
VI : More than 60 months	1	0	1	2	4	12.10
Total	10	0	10	13	33	100.00

The excavation yielded the largest faunal assemblage from Mamba 1. It is again dominated by cattle remains in almost a 3:1 proportion in relation to ovicaprines. The large number of teeth was particularly noticeable during the analysis.

There was no evidence for *Capra hircus* in the sample. The presence of a bifid thoracic vertebra indicated the presence of a humped animal among the cattle.

Measurements of the canid bones indicate the presence of three sizes of domestic dogs. Felid remains are again present alongside grey duiker, hippopotamus and elephant.

#### DISCUSSION AND CONCLUSIONS

##### *Age distribution (Table 3)*

On the basis of tooth eruption patterns and wear, the assemblages from all of the excavations contain a relatively high proportion of immature animals with 50 % of the *B. taurus* remains and 51 % of the ovicaprine remains falling into this category.

In the small sample of cattle teeth from Area VII, 50 % of the teeth came from immature animals. In the smelting area sample, 64 % of the cattle teeth were from immature individuals, whereas there was no particular peak in the age distribution among ovicaprine teeth.

The preponderance of teeth from younger animals on other sites has been generally interpreted as utilisation of prime meat by the inhabitants (for instance Brain 1974). The main part of the cattle sample came from animals in their youthful prime, i.e. at a phase when they would yield a large quantity of high quality meat. This differs from a pattern in which very young animals are present, especially among small stock (Voigt 1984) or where the sample is dominated by old animals (Plug and Roodt 1990). The age distribution at Mamba 1 suggests utilisation of prime meat.

TABLE 4

Mamba I – Summary of bovid skeletal part preservation in terms of number of bones

	Area II		Area VII		Furnace area I		Total
	Ovicaprines	Cattle	Ovicaprines	Cattle	Ovicaprines	Cattle	
Skull fragments	0	7	0	3	1	5	16
Hyoid	1	0	0	1	1	3	6
Horncore	2	5	2	2	0	2	13
Atlas	1	2	2	2	1	3	11
Axis	1	3	1	3	0	6	14
Sacrum	1	0	0	0	1	0	2
Scapula	6	5	6	4	8	8	37
Humerus	4	5	5	5	8	9	36
Radius	1	8	4	5	7	3	28
Ulna	1	4	5	1	4	3	18
Pelvis	10	7	5	6	3	12	43
Femur	5	2	2	5	1	3	18
Tibia	2	1	8	5	3	9	28
Metapodial	6	11	9	14	5	18	63
Astragalus	3	0	5	5	1	3	17
Calcaneum	2	1	2	3	4	11	23
Naviculo-cuboid	0	1	0	7	1	2	11
Carpal/tarsal	0	10	0	3	0	5	18
Lateral malleolus	0	1	0	1	0	0	2
Sesamoids	0	1	0	0	0	1	2
Phalanges	2	20	3	13	2	21	61
Total	48	94	59	88	51	127	467

### *Skeletal part representation (Table 4)*

In Area II, bones from the forelimb, pelvis and lower hind limb were most common from *B. taurus*, while scapula, pelvis and femur were most common among the ovicaprines. In Area VII bones of the extremities are the most common element of *B. taurus*, whereas there is a relatively even representation of the postcranial skeleton among the small stock. In the 'Oven' (furnace) area there is an even representation of *B. taurus* limb bones, but forelimbs are more common than hind limbs in the ovicaprine sample. There is a very high proportion of teeth in the furnace area.

The unequal representation of limb bones as opposed to vertebrae and ribs is probably at least partly due to sampling procedures on site, thus reducing the usefulness of the body part representation for interpretive purposes. However Plug & Roodt (1990) noted a similar predominance of teeth/cranial material on the smelting site at uMgungundlovu, with limb bones on another section of the smelting area. The large number of teeth in the area was related to the distribution of meat, in that men were given the favoured head of an animal. This interpretation fits comfortably with the situation at Mamba 1. An alternative explanation for the large quantity of bone in this area would be that bone was being used as a flux in the smelting process. It would be interesting to test this hypothesis by analysing slag or ash from the furnace.

### *Culturally modified bone*

Two bone tools were found in the Mamba 1 collection: a blunt point made on a bone splinter, and an eyed needle. The eyed needle was made from a piece of metapodial from a medium-sized bovid. It is highly polished from use: the single perforation just below the remains of the articulation was drilled from both sides. In addition a bone flake of which one end had been utilised until it was polished and straight was found. While not a formal tool, it was certainly a utilised piece of bone. The shape is reminiscent of the kind of bone used as a melon knife or a marula knife.

### *Molluscan remains*

Although the excavator recorded only cowries from the excavations at Mamba 1, remains of eight other marine, freshwater and terrestrial molluscan species were identified during the analysis of the bone material. These included a specimen of *Nerita albicilla* and a large *Perna perna* valve from AVII which had been modified. The *Nerita* specimen was drilled for suspension; it was perforated through the apex which is smoothly polished to form a flat surface. The large *Perna* valve from AVII had one border ground smooth from utilisation. These shells are frequently used by potters to smooth the coils of their pots. Similarly modified shells have been found at other Iron Age sites, e.g. Mapungubwe (Voigt 1983). The remains of two achatinid species were found in the sample; this phenomenon is commented on in the report on the Wosi assemblage (Voigt & Peters 1994).

The overall picture presented by the faunal sample (Table 2) is of a settlement in which large stock played an important part. Cattle bones and minimum number counts are higher than those of small stock. In the only reasonable sample (from OVI) cattle outnumber ovicaprines 2:1 on MNI counts and 3:1 on bone counts. Cattle bones make up 67 % of the bone sample of domesticates; taking into account the live

weight of cattle as opposed to ovicaprines the importance of cattle as a source of meat becomes even more obvious. Although we believe that the sample is selective we know that the earlier excavator was competent to identify small domestic animal bones. Therefore, there are no grounds to believe that the discrepancy between the numbers of bones of small and large stock is a result of excavation methods or preservation conditions. Small stock were simply less common than large stock. The rarity of goats in the sample may be partly the result of the small size of the assemblage; however, at Wosi and at Ndongondwane sheep outnumber goats in much larger samples. The wild species present indicate exploitation of relatively closed environments, suggesting access to more heavily bushed environments than are present in the valley today. The number of felid remains is high for so small a sample; as they occur in three of the four activity areas it argues for deliberate hunting/snaring, possibly for pelts. Whether these could also be for trade or whether they would have some ritual significance as clothing or smelting-medicine we cannot at present say; the ethnographic literature documents extensive use of carnivore remains in various ways which would leave little trace in the Early Iron Age record. In general, carnivore remains are certainly more common on earlier Iron Age sites than later ones, but this could be due to the pressure of increasing human populations forcing carnivores to retreat to more remote or less disturbed areas and thus making them less readily available to inhabitants.

Mamba 1 forms an intermediate link between Wosi and Ndongondwane in terms of dates and stock proportions. The high proportion of cattle to small stock is one of the most interesting aspects of the assemblage from Mamba 1. It suggests a concentration of, or access to, cattle rather than ovicaprines. The proposal by Van Schalkwyk (above) that large stock were traded by other mixed agriculturalists in the area into the Mamba 1 community in exchange for iron being produced, is an attractive one. Certainly the presence of marine shells at Mamba 1 and at Wosi indicate the existence of a network of contacts which would allow for free movement of desirable commodities between these early communities in the Thukela Valley.

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