

## CULTURAL PROXIES FOR DROUGHT IN THE MAPUNGUBWE LANDSCAPE

Tom Huffman

As readers of *The Digging Stick* know, the Mapungubwe Cultural Landscape is now on the World Heritage List. Mapungubwe has this international standing because it was the earliest civilisation in southern Africa and laid the foundations for Great Zimbabwe. We know at a general level which social processes led to this complex society. Most importantly, intensive agriculture and surplus trade wealth helped to transform social ranking and hereditary leadership at K2 to social classes and sacred leadership at Mapungubwe (Huffman 1982; Mitchell 2002; Pikirayi 2001).

Because of its importance, we started to investigate various aspects of agriculture about 10 years ago. Among other things, we chose settlements with burnt daga (mud) grain bins for excavation. We were somewhat surprised to discover that these structures could be used as a cultural proxy for drought. This story involves isotopic data, as well as ethnography and archaeology.

### Isotopic data

To establish independent evidence for climate, Jeannette Smith (Smith et al. 2007) first studied a large suite of fauna from modern situations. Using stable carbon, nitrogen and oxygen isotopes, she sampled animals such as impala from areas with different rainfall averages, stretching from south of the Soutpansberg, where rainfall is high, to the Limpopo, where it is not. The isotope  $\delta^{15}\text{N}$  in particular registers aridity: values over 8,9 mean drought conditions, while smaller values, such as 6, mean high rainfall. Smith then examined cattle and small stock remains from excavated sites within the Mapungubwe landscape.

Overall, the Zhizo Period (AD 900–1000) had about the same climatic conditions as today, which is dry, while most of the K2 Period (AD 1000–1200) was wetter than today. It was during this period that people started to cultivate the Limpopo floodplains extensively, contributing to a dramatic increase in

population by Transitional times. The short Transitional Period (AD 1200–1250) experienced several droughts and then, during the Mapungubwe Period (AD 1250–1300), high rainfall returned. It is the droughts with which we are most concerned.

### Ethnography of rainmaking

The normal settlement provides a context for understanding the human response to these droughts. Typically, most people lived in settlements that followed the principles of the Central Cattle Pattern (CCP). In this pattern, the centre of the settlement was the domain of men. It encompassed sunken grain pits for long-term storage, an assembly area where men resolved disputes and made political decisions, a blacksmith's area and cattle kraals where men related by blood and other important people were buried. The outer residential zone, the domain of women, incorporated the households of individual wives with their private sleeping houses, kitchens, grain bins and graves (see Kuper 1982 for details).

McEdward Murimbika's (2006) recent ethnoarchaeological research shows there was a specific

### IN THIS ISSUE

- 1 Cultural proxies for drought in the Mapungubwe landscape – *Tom Huffman*
- 5 Some thoughts on the theory and practice of beadwork communication – *Frank Jolles*
- 11 Wits scientists reveal *Australopithecus sediba*
- 14 The Mapungubwe Museum gold conservation project – *Sian Tiley*
- 15 Bone art: The Knysna scapula – *Hugo Leggatt*
- 17 The Southern African Institute of Maritime Archaeology – *Bruno Werz*

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ideology about agriculture and rain-making associated with this settlement pattern. During normal climatic times, rainmaking activities would have been part of the agricultural cycle. In September, at the beginning of a cycle, chiefs would send a black goat to their professional rainmakers, instructing them to replenish their rain medicines and to repair their work areas. Chiefs controlled the process, but unless they received specific training, they were usually not rainmakers themselves. Various people assisted the specialists. During the cycle, for example, prepubescent girls spread rain medicines on the fields. Later, headmen and other important elders would bring burning cattle dung from the capital to their homes so that the smoke would call the clouds to all corners of the chiefdom.

Throughout this time, rainmakers were busy working their medicines, calling the rain and combating enemies who tried to prevent it. They performed this work in a special area called a 'rain kraal', located at the back or just behind their homesteads. These locations are part of the front-secular/back-sacred dichotomy inherent in the CCP.

In times of severe drought (three to five consecutive years), however, rainmakers abandoned their rain kraals and climbed special hills to 'pull the rain down'. Rainmaking hills are distinctive in that they (1) are usually steep-sided with difficult access, (2) are too small and awkward for normal settlement, yet covered in pottery from different periods, and (3) have exposed rock that often bears artificial cupules in association with natural cisterns. According to the ethnography, the hills represent mountains that are, literally, the source of streams while the cisterns represent pools. The cupules receive ritual beer to propitiate various spirits. There are often many cupules because each spirit must be separately propitiated each time.

The copious pottery is the result of another important principle: once used in ritual, a sacred object cannot be returned to a domestic context. A further principle was that these hilltop rainmaking places were conceptually out in the 'bush', the terrain of supernatural forces. Mapungubwe and Great Zimbabwe were two such rainmaking hills before they became the palaces of sacred leaders.

Among the Bantu-speaking people in southern Africa there is a belief that humans help to cause natural disasters, such as drought. Usually, severe droughts are blamed on a breach in pollution rules regarding something new brought from outside, such as a new



Fig. 1: Remains of double grain bins in a Transitional Period homestead

variety of seed. Because the new seed comes from somewhere else, it is automatically polluted and therefore requires cleansing (see Ngubane 1977). Of course, not everyone follows the rules. If a farmer fails to have the foreign seed cleansed and misfortune follows shortly afterwards, he is to blame.

Ethnographically derived principles such as these are important tools because of the continuity between Eastern Bantu speakers today and pre-colonial farming societies. In the case of the present study, Murimbika interviewed several different groups speaking different dialects and languages (e.g. Sotho-Tswana, Shona and Venda) in different rainfall regimes. This diverse distribution suggests that the main principles have some antiquity. Some principles, in fact, were noted at first contact (e.g. Mackenzie 1871; Schapera 1971). Ultimately, the validity of any model is based on its successful application. Fortunately for our purposes, the rainmaking system has an archaeological correlate.

### Archaeology of rainmaking

Alex Schoeman's doctoral research (2006) uncovered the rainmaking signature on hilltops. As a rule, the hilltop is comparable to the back of a settlement where grain bins, small stock kraals, middens and rain kraals were located. However, grain bins on the hilltop were temporary, as indicated by the fact that they were built directly on the ground, while untrammelled dung shows that the associated small-stock kraals were also temporary. Burnt sorghum is a common find along with remains of other plants having symbolic value. All these features are present because the rainmaker must start again; whatever he did in his rain kraal must be repeated on the hill. Because he sacrificed a goat at the beginning, for example, he must sacrifice another on top of the hill. Of equal importance is the fact that normal housing on



the hilltop is not part of the signature. No other activity on record produces this kind of deposit. Indeed, temporary small-stock kraals and temporary grain bins together with burnt sorghum on top of steep-sided hills appear to be exclusive markers. If exclusive, then the hilltop signature is a proxy for severe drought.

There is more to the story. At the end of his hilltop activities the rainmaker burns down the temporary grain bin, whereafter every citizen must perform cleansing rituals. Those people who are thought to have caused the drought have to burn their own grain bins and build a new one on top. Our excavations in mid-2008 in Transitional Period homesteads uncovered the remains of such double grain bins (Fig. 1). Because of pollution concepts, no stranger would knowingly build his grain bin on top of someone else's. Thus, the same family had built the double grain bins.



Fig. 2: Double house floors from the Transitional Period on top of Mapungubwe Hill

In some cases today, women may plaster the surface underneath grain bins for further protection. Such thin plastered surfaces underlay some grain bins at a site on Venetia. These thin surfaces lay beneath thick daga pieces with pole and grass impressions on one side and flat surfaces on the other. These thick pieces were the burnt residue of the grain bin floors. Red, oxidised zones show that the grain bins were burnt from underneath, which indicates that veld fires, accidental sparks or lightning were not the principal cause. Moreover, burnt daga structures are not as common as one might think. Out of some 1 000 Iron Age sites on record in the Mapungubwe landscape, only three per cent have this feature. The random

distribution of these few sites in time and space eliminates systematic violence as an explanation. Throughout the area, in fact, occupation levels containing burnt structures correlate with Smith's isotopic evidence for drought.

A few examples emphasise the strength of this point. First is the well-known settlement of Schroda, excavated by Edwin Hanisch (2002) and then re-examined by John Calabrese (2007). In Area 5 (Table 1), every village level with evidence for burning also has at least two sheep/goat bones with high  $\delta^{15}\text{N}$  values: Occupation E has 17; C has five and B four. Occupation A lacks burnt daga in this trench, but the high readings correlate with burnt daga in the upper layers nearby. There are therefore no anomalies.

In the second example, Pont Drift (Hanisch 1980) contains four stratigraphic units (Table 2), demonstrating once again the correlation between burning and aridity. Two other points are of interest with this example. First, there are some lower values for small stock in Unit II, as well as high values. This is because every occupation probably lasted for a generation or more, while the droughts only lasted from three to five years. It is therefore no surprise that some bones reflect higher rainfall. Secondly, multiple burnings occurred at Pont Drift during the Transitional Period (AD 1200–1250), as they did at the Venetia site.

This last point is also true for my third example, the deposits on Mapungubwe Hill (Table 3). Moreover, Pretoria University's (Mey-

Unit	Ceramics	Level	Feature	$\delta^{15}\text{N}$ isotope value for sheep/goat
Occ. A	Leokwe	2		8,7
		3	burnt daga (Area 1)	7,2/10/10,5
		4		9,1
Occ. B	Zhizo/Leokwe	5	burnt floor	9,0/9,1/9,9/11,0
Occ. C	Zhizo	6iii/7	burnt daga	8,9/10,2/11/11,1/11,2
Occ. D	Zhizo		dung	–
Occ. E	Zhizo	8–10	burnt hut	17 @ 9,1–12

Table 1: Schroda Area 5

Unit	Ceram-ics	Level	Feature	$\delta^{15}\text{N}$ isotope value for sheep/goat
I	TK2	1/2	burnt daga	9,3/10,1/10,7/11,5/12,5
		3		7,1/8,3
		4		9,6/10/10/10,1
II	K2	5/6	hut, burnt surfaces	(6,6/7,4/7,8/8,4/8,8) 9,5/9,7
		7		8,7
		8	burnt crust	9,8
III		9	dung	8,5/8,6/8,7/8,8 9,3
		10	dung	8,1/8,4/10,4/11,1
	Zhizo?	11	dung	8/8,5
		12	dung	8,9/9,1
IV	Zhizo	13/14/14i	burnt posts	8,9/9,5/10,1

**Table 2: Pont Drift**

er 1998) careful and comprehensive excavations show that burnt structures occur in the lower two units (Fig. 2), but not in the two upper units. The Mapungubwe excavations therefore provide evidence for the opposite correlation: grain bins were not burnt during periods of high rainfall.

Overall, 19 daga levels correlate with 60 high values, while 15 levels without daga have 35 low values (Huffman 2009). These correlations are too numerous and complex to be a coincidence. Clearly, burnt structures in ordinary homesteads provide another cultural proxy for severe drought. As the ethnography shows, the two proxies are paired: hilltop rainmaking was linked to burnt grain bins in ordinary settlements. It is noteworthy that the linkage provides evidence for simultaneous burnings throughout the Mapungubwe landscape. Future research needs to establish the extent of the droughts.

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Unit	Ceram-ics	Level	Feature	$\delta^{15}\text{N}$ isotope value for sheep/goat
I	Mapun-gubwe	1		–
		2		–
		3		–
II	Mapun-gubwe	4		7,1/8,5
		5		6,2/6,3
		6		–
III		7		7,9/8,4/8,5
		8		7,5
	TK2	9		7,9
		9i		–
		9ii	burnt daga	–
		10/10i	burnt daga	9,8
		10ii		–
		10iii	(with L9ii, 10 or 11)	9,1/10,3
		10iv		–
IV	TK2	11	burnt daga	9,2/9,3/9,3

**Table 3: Mapungubwe Hill – MK1**

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# SOME THOUGHTS ON THE THEORY AND PRACTICE OF BEADWORK COMMUNICATION

Frank Jolles

In the widest sense, all items of adornment function as signifiers and, by extension, as systems for the storage and retrieval of information. Within this context, the Zulu beadwork considered here is a special case only in respect of the range and depth of information it can accommodate.

Of the many communication systems in existence, the dominant one in most present-day cultures is writing, which is based on converting the audio-impulses of spoken language into visual symbols. Beadwork communication on the other hand was based mainly on a system of colour allusions drawn from the environment, but also on certain symbols or 'icons'. As Princess Magogo, daughter of King Dinuzulu, explained: 'To appreciate and understand these [beadwork] letters it is necessary to have a sound knowledge of the people's mode of living, their psychology, traditions, folklore, wild and domestic animals, veld and trees' (Grossert 1968). This system operates largely on a visual level; it does not require transcription from one mode of sensual perception into another. It seems that it even by-passes language. That, at least, is the conclusion that Tyrrell and Jurgens (1983) reached in the following carefully worded description:

'The process is spontaneous and direct, and as it does not normally involve "translation", it approaches direct experience rather than intellectual activity. The basis for this process seems to be a well-established series of associations, which through cultural conditioning at an early age, brings to the mind of the individual the feeling and general image that inspired the colour sequence of an ornament.'

This corresponds well with the ever-increasing body of neurological evidence on the compartmentalisation of the functions of the brain. Tyrrell and Jurgens avoid the question of whether the 'well-established series of associations' arose 'through cultural conditioning', or whether they were present as inherited configurations in the first place. I read them as saying that the ability to form such associations is an inherited function, but that the specifics are determined by the cultural environment. Wickler and Seibt (1991) would go further and say that some limbic colour associations (for instance yellow with black for danger) are passed on genetically and that these play a role in aesthetic experience.

According to Princess Magogo, this mode of communication has been in use since the time of Mpande ka Senzangakona (Grossert 1968), who reigned from 1840 to 1872.

## Writing and colour/icon coding compared

There are some fundamental differences between written communication and beadwork, which are so familiar that they tend to be taken for granted. The written word assumes a spatial and temporal validity that usurps the authority of the collective and individual memory upon which the sense of continuity of oral societies depends. This is no novel insight. Plato relates in the dialogue *Phaedrus* that when offered the gift of writing by Thoth, the Egyptian god of knowledge, King Thamus turned it down because he was afraid that writing might cause forgetfulness since people would no longer exercise their memories. In other words, instead of being integrated into the present as 'living memory', i.e. part of an evolving process, the past would become a record of events that would need to be recalled by reference to documentation.

An example nearer home would be Dingaan's reaction to the demands of the Boers to cede to them large parts of his kingdom (Laband 1995: 86). By transferring his mark onto the document, an object which he did not fully understand, but which in his view might have magical powers, he believed that he had delivered himself into the hands of those who had made it. From his perspective the only remedy lay in removing the instigators before their magic could take effect. His final command, therefore, given as the Boers were being dragged off to kwaMatiwane, was: 'Kill the wizards'. This was in keeping with the tradition established by Shaka of dealing with sorcerers. It differs from the position taken by King Thamus because the Zulu king failed to grasp the nature of literacy.

So the written word, by virtue of the universality of its coding, its lack of dependence on local determinants and, at least initially, its hermetic nature, proved a powerful psychological tool in subjugating what was at that time still an oral society.

Beadwork could never exercise a similar function. To begin with, it was entirely local, being governed by regional colour conventions of between three and seven colours that were stabilised by the trade in beads (the manufacturers even issued regional colour cards for the guidance of traders). They were typically local in another respect as well. Most colours had more than one associative meaning and two or more

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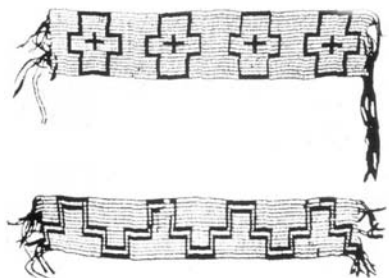
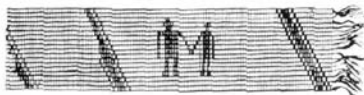


Fig. 1: The written treaty (top) and the beadwork treaty (above) showing a Quaker (left) and an Indian holding hands in amity, mountains as boundaries (the mountains would be remembered and passed on by those witnessing the ceremony), and rivers.



Fig. 2: The beadwork in the left-hand photo shows how lowland people (umzansi) from the coast gave up their original pattern (on right) and adopted the simple linear configuration of their new neighbours (on left) when they moved into the interior. But they retained their colours, thereby giving rise to a new four-colour convention that was named after their place of origin. The examples in the right-hand photo demonstrates the historical migration of the Thembu clan into the neighbourhood of the more powerful and more populous Mchunu clan. Again, the original pattern (on right) is abandoned in favour of the linear Mchunu configuration, whilst the colours are retained, giving rise to a new five-colour convention termed isithembu.

Fig. 3 (right): Outfits from the late 1960s, consisting almost entirely of beadwork.  
[Photos by Richard Ndimande at Greytown]

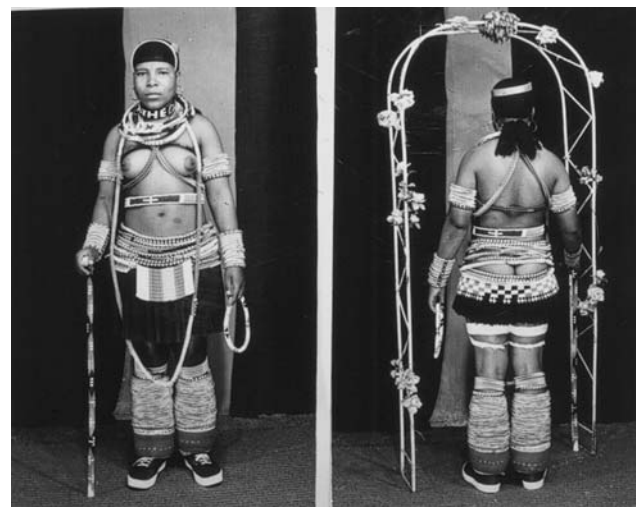


Fig. 4 (below): The so-called Zulu love letters

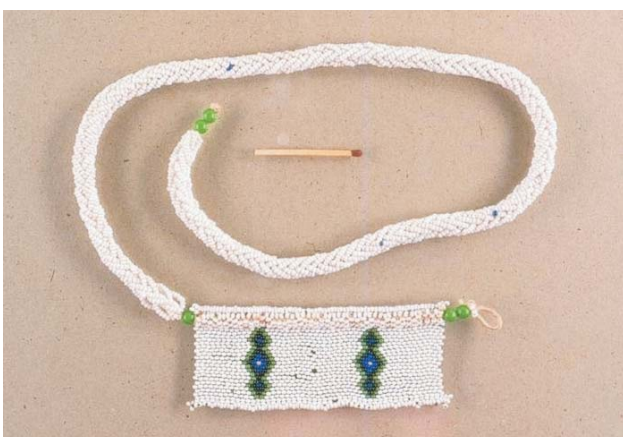






Fig. 5: The message is carried in colours alone



Fig. 7: The isikoti, which displays two texts

colours could form compounds with distinctive meanings beyond those that could be derived from the original components. As a result of fixed colour conventions, these combinations varied from place to place. So, by its very structure, beadwork communication could only take place within a local context: information on personal matters would be limited to the boundaries of the *isigodi*, while more general information might reach further afield to include neighbouring regions.

This is not to say that it would be theoretically impossible for beadwork to make statements in a wider



Fig. 6: Top left: Umzansi; top right: izibebe from Upper Umvoti; bottom left: second text in the izibebe series; bottom right: amathemba from Msinga

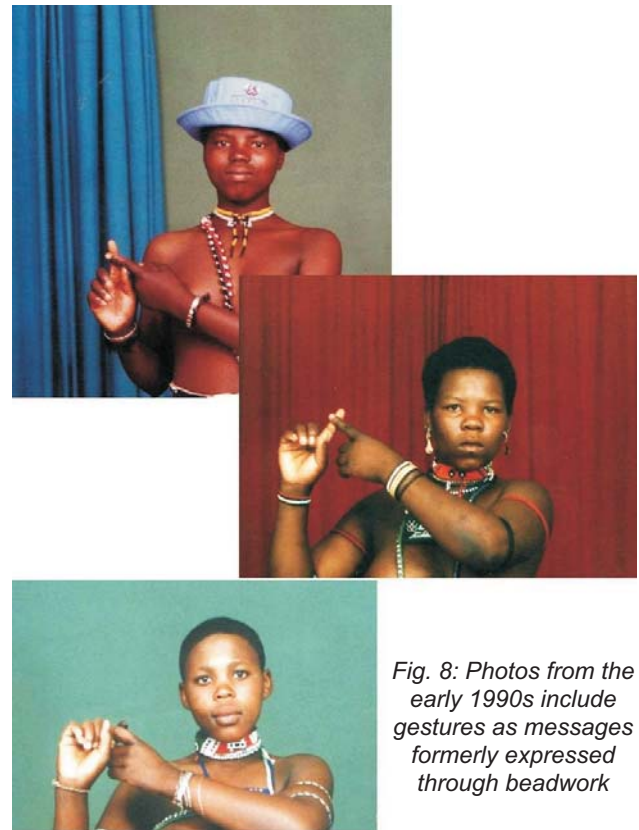


Fig. 8: Photos from the early 1990s include gestures as messages formerly expressed through beadwork

context. The treaty between William Penn and the Indians of 1682 (Fig. 1), for instance, was recorded both in beadwork and in writing. But in the tradition of the Zulus the use of beadwork was restricted to the personal and local spheres.

Beadwork can be used to store information through patterns, icons and colours. There is more to this than meets the eye in patterns as they depend on symmetries (Washburn & Crowe 1989, 2004). An analysis of the underlying symmetries, of which the beadwork makers themselves are often quite unaware, can uncover unexpected historical contacts and relation-

ships. The examples in Fig. 2 document the migration of groups of outsiders into an existing community.

### Colours and icons

The pictures of a girl dressed in her beadwork finery in Fig. 3 were taken in the late 1960s, probably in connection with an important event such as the *umemulo* coming of age ceremony. They document how different pieces were worn together to make up an outfit consisting almost entirely of beadwork, a context that is lost when pieces are preserved singly. For the girl they record a stage of life, her place in her family and age group, and her relationships to her friends.

Fig. 4 demonstrates how beadwork was used to communicate thoughts and feelings in small panels given by girls to their boyfriends – the so-called Zulu love letters. In Umvoti they are called *isibebe*, plural *izibebe* ('flat object'); in Msinga *ithemba*, plural *amathemba* ('hope'). Both may be worn as part of a larger assemblage or separately, and both are displayed in public. The examples date from a time before the knowledge of writing had become widespread.

The illustration on the left is an *isibebe*, often worn by engaged girls, but also by married women. It dates from the 1960s and is from the eMambulo river area and uses the Umvoti colour convention. It relies on two icons, 'like paraffin lamps', *iziketekete*, enhanced with colours. It is saying, 'All is well', 'We are very happy' (pers. com. Mrs Nelisiwe Mtshali).

The beadwork on the right is also an *isibebe* from the same region. It was made in 1969 by Mrs Nomhawu Ndelu of Chief Ntuli's area, Melmoth. The icon is a heart the right way up. Translated into words, it means '*inhlizi* – You are in my heart'. But this positive feeling is modified by the colour text running along the top, which says: 'I am being courted, the other boys are running away' (transparent yellow), 'But you have stopped paying *ilobolo*' (light blue – '*ibusende*', a beggar), 'There is no cloud in the sky' (dark blue – '*izulu*', sky), 'But you are so poor [who will pay for the marriage rites?]' (bottle green – '*inyongo yenkukhu*', the gall-bladder of a chicken), 'You are poor' (orange), 'I have waited for you so long until I am turning black, I won't go back to you' (black), and 'Even if things are getting brighter, I won't go back' (sparkle). The series may then be completed symmetrically in reverse. The fact that the heart is the right way up belies what she is saying: she is warning him to hurry up with his *ilobolo* payments.

In the previous examples the main carriers of the message have been the icons, modified by colours and by the positions of the icons themselves. But the examples in Fig. 5 use colours only. The top illustration is in the seven-colour convention and the basic sequence of Msinga, called *isishunka*. The sequence itself is not variable. It consists of 17 fields, five triplets

and two singles, always in the same order. However, it can start and finish at any point and it need not be complete. If it has a message, it will be triggered by the first two fields. This arrangement allows a fixed number of well-defined messages to be incorporated, which to the practised eye will be recognisable at first sight.

The *ipasi*, choker, at the foot, has what appears to be a two-field red-black unit at one end. That this is a part of the triplet 'black-red-black' is indicated by the very narrow strip of black that precedes it and further by the large green beads of the fastener. The other end of the *ipasi* finishes with a complete 'blue-black-blue' triplet, including three of the fastener beads. The remaining two beads are red, echoing the opposite end, whereas the sequence would normally continue with green. This is a jarring 'error' that draws the onlooker's attention to the initial red-black fields. They refer to the *isicholo*, a red wide-rimmed hat worn by Msinga married women, and the black hide married women's skirt, the *isidwaba*. The well-established meaning of this combination is 'Name the date'.

Beaded texts based on colours could run to considerable lengths, as in the 58-sentence *incwadi*, the letter compiled by Princess Magogo at the request of Mr AT Henderson in 1963. However, the longer and more complex such texts became, the more detailed and accurate the local knowledge would need to be for it to be understood, and the more tightly knit the in-group would have to be for it to circulate. This would have been the case among the wives of King Ceteswayo from whom Princess Magogo learnt the art as a girl (Grossert 1968).

### Transitional pieces and written texts

With the spread of primary education in rural regions in the 1960s, alphabetic texts began to be used in beadwork. But before they established themselves there was a brief transitional period in which grapheme-like non-alphabetic symbols appeared (Fig. 6, top left). Such pieces are rare. The graphemes 'A' and 'H' in *umzansi* colours may also be found painted next to the entrances of houses from the 1980s. They are generally claimed to be purely decorative and to pre-date the introduction of writing.

The collision between the old and new systems is most apparent in the small panels, the *izibebe* and *amathemba*. Here, the icons were replaced by texts and the colours lost their power of communication. The process of translating one set of signifiers into another, visual-symbolic into aural-linguistic ones, was facilitated by the Zulu language itself, which is particularly well endowed with idiomatic phrases. Many of those encountered on the beadwork panels can also be rendered by icons, though the subtlety of allusion and range of variation inherent in a combination of icon and colour can never be replicated by an idiomatic phrase. Such fine distinctions were, as the saying goes, 'lost in translation'.



The following example (Fig. 6, top right) is particularly interesting because my informant, Mrs Eunice MaMtshali Ntuli, was able to link it directly to an older colour-configured *isibebe*. It reads JABULA WETHU, literally: 'Be happy our', which is a contraction of *Jabula wethu ngoba ngiyaku thanda*, 'You are happy because I love you'. It is the idiomatic rendering of the colour sequence white-red-black-dark blue. The colours, however, convey a richer text, something like: 'My heart is pure and I love you, but the future is full of problems, I have informed my neighbour that things are not going well'. It represents the acceptance of the boy's courtship and is binding on the girl.

Displayed by the boy it informs everyone that the couple is determined to get married. But that does not depend on them alone, but on the approval of the elders of the two families concerned. So this *isibebe* is the opening gambit in a long process of negotiations. It used to be given to the boyfriend right at the beginning of the courtship.

Most *izibebe* from the 1960s to the 1970s have survived singly and without detailed provenance. So it is understandable that, despite exhaustive attempts at classification, it was not realised until recently that they could form sequences amounting to a direct input into marriage negotiations by the couple (Jolles 2006: 125ff). This would otherwise have been beyond their reach.

The next text in this series (Fig. 6, bottom left), the second of five, reads AMAXOKI AZODELA, 'Have enough of the trouble-mongers', implying whatever others say, it will not detract from them from their love for each other. Mrs Ntuli's rendering is: 'There are trouble-mongers, I am not saying anything, I love you more', adding the following amplification: 'They say to the boy "don't love that girl" and they say to the girl "don't love that boy"'. But the couple wears this [*isibebe*] in spite of this to say they love each other.' Malicious gossip is a recurring theme and here it is probably a reflection of the antagonism traditionally shown by the young men of the girl's kraal towards any new relationship (Krige 1950: 124).

Because they are so cryptic, the idiomatic phrases have almost become icons in their own right. Some texts are difficult to decipher because they contain lateral inversions or mirror images, do not separate the words and mix upper and lower case indiscriminately. Perhaps this did not matter so much, as most of the people at whom the *izibebe* were directed were illiterate. Mrs Hluphekile Zuma from KwaLatha near Keate's Drift, maker of a number of very personal *amathemba* herself, did not see a problem in this: if someone did not understand, he would have to be told what it means. Like an icon, it should be recognizable without the ability to read it.

The Msinga colour conventions were abandoned in favour of white lettering on a dark background (Fig. 6, bottom right). The resulting panels are generally said

to represent writing with chalk on a blackboard at school. In normal writing, this text reads '*emhlabeni kuso sizini masingaba naki abantu*', and again addresses the problem of gossip. Literally it translates as 'On earth (locative) it is a place of sorrow, don't pay attention (from *singa*, search intently, peer about) to other people'. This was rendered as 'The world gives problems', with the following commentary: 'If you are human you can't help it if you have problems. You are just a person with your faults – so don't worry what other people are saying about you'. As part of a series it refers to a specific personal context.

### Combinations of icons and texts

Whilst one could regard the *izithemba* with their unreadable exhortations both as texts and as icons in their own right, they were unsuited for rendering longer coherent passages. There were only two alternatives: either to resort to written text entirely, abandoning beadwork as a medium, or to find a synthesis between the old and the new by incorporating written texts without invalidating the role of the icons and colours. The latter is exactly what the beadwork makers from the foothills of the Drakensberg started doing in their *izikoti* in the late 1960s.

The *isikoti* is worn by the bride as she walks from her family home to the home of her future husband. That is where the wedding ceremony will take place. After her father has called on the ancestors to bear witness and the senior wives of the household have dressed the bride and given her last-minute advice on how to deport herself as a married woman, she sets out on her own over the veld followed at some distance by young men of her age group carrying household utensils. It is a profoundly emotional transition; she is leaving her home and her former life behind her.

The *isikoti* in Fig. 7 displays two texts. The eighth panel from the bottom (*izikoti* are always read from the bottom up) reads *Khohlwa yimi wethu*, 'You must forget me'. This seems straightforward. The sets of 'Hs' on panel four are purely decorative graphemes, similar to those painted on house walls. However, the next text, which is on panel ten, is rather more cryptic. It is in old, deep Zulu, full of allusions that not everyone could follow. Separated into words it reads *Ahlabi ngakumisa ngonyama*. We could not decipher the first word, though *ahle* as a conjunctive can indicate 'possibility, likelihood'.

*Ngakumisa* was translated as 'Don't come with nice things, don't bring presents'. In fact it derives from *ukumisa*, which can denote 'Act as best man', e.g. in the phrase *ukumisa emgcagcweni*, 'to act for the bride at the wedding', *nga-* being the negative, i.e. 'don't do this'. *Ngonyama* means 'lion', but here it probably refers to the phrase: *Sekubambhene ingwe nengonyama*, 'The leopard and the lion are at strife', i.e. two strong opponents are fighting (Doke & Vilakazi 1990: 557).

So the bride is saying in public to her former lover who won't let go: 'Don't come to the wedding or there will be a terrible fight'. In using imagery of power, lion versus leopard, she is flattering her former suitor, hoping to defuse the situation by preventing loss of face. She, and all present, know very well what would happen if the guests and relatives arriving in the taxis in panel six started fighting with the former suitor and his friends: they would have to summon the ambulances in panel five (seven of them!) to take the injured and dying to hospital. These texts replicate the prior knowledge required for understanding the icons.

### Beadwork replacement

Even this final adaptation could not prevent beadwork communication from being overtaken by changes in lifestyle and the advance of technology. The beginnings can be traced back to the migrant labour period of the 1960s and 1970s. The black and white studio photographs in Fig. 3 were taken to mitigate the effects of oppressive laws that prevented families from the countryside to visit their urban relatives. But they were restricted to portraits of girls dressed in their beadwork finery in static postures with expressionless faces. The new generation of photographs from the early 1990s (Fig. 8) included gestures as messages that would otherwise have been expressed through beadwork. The beadwork itself was reduced to mere decoration and increasingly replaced by fabrics; now it is the faces and matching gestures that tell the story. The meaning of the gesture is, 'I swear' (*ukufungo*, to

take an oath). All three are engaged as they are wearing cloth skirts, *amabaye*, and the gestures and expressions are thus directed at their boyfriends.

### Conclusion

As the era of beadwork fades into history along with the secluded rural society that supported it, the media from the outside world flood in: literacy, writing, photography, cellphones and SMSs. Education, social change and advancing technology combine to create new demands on women and erode the structures on which life in the old order was based.

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## AFRICAN ART PART OF NEW WORLD DIGITAL LIBRARY

A rock painting of a rain animal is among the African treasures listed on the World Digital Library website launched in 2009 ([www.wdl.org](http://www.wdl.org)). The painting is from Clocolan in the eastern Free State and is part of the Woodhouse Rock Art Collection of the Department of Library Services at the University of Pretoria. The collection has more than 23 000 slides, maps and tracings from rock art sites in South Africa.

The digital library was launched by Unesco and 32 partner institutions and features unique cultural materials, including manuscripts, maps, rare books, films, sound recordings, and prints and photographs collected from libraries and archives around the world. The project's aim is to expand the volume and variety of cultural content on the Internet, provide resources for educators, scholars and general audiences, and narrow the digital divide within and between countries by building capacity in partner countries.

The library functions in seven languages: Arabic, Chinese, English, French, Portuguese, Russian and Spanish, and includes content in more than 40 languages. There are vivid descriptions of each item

and video, with expert curators talking about selected items. It offers unrestricted access, free of charge, to these materials.

Treasures featured include Arabic scientific manuscripts from the National Library and Archives of Egypt; early photographs of Latin America from the National Library of Brazil; the *Hyakumanto darani*, a publication from the year 764 from the National Diet Library of Japan; the famous 13<sup>th</sup> century 'Devil's Bible' from the National Library of Sweden; and Arabic, Persian and Turkish calligraphy from the collections at the US Library of Congress. The National Library of China contributed manuscripts, maps, books and rubbings of steles and oracle bones that span Chinese history.

### ACKNOWLEDGEMENT

News items featured in *The Digging Stick* often have their origin in *Paleonews*, a weekly compendium of archaeological and scientific news featured in the international media. *Paleonews* is compiled and circulated electronically by Tinus de Beer of the SA Amateur Society of Palaeontologists. E-mail Tinus at [paleonews@icon.co.za](mailto:paleonews@icon.co.za) to find out how to subscribe to this free service.



## WITS SCIENTISTS REVEAL AUSTRALOPITHECUS SEDIBA

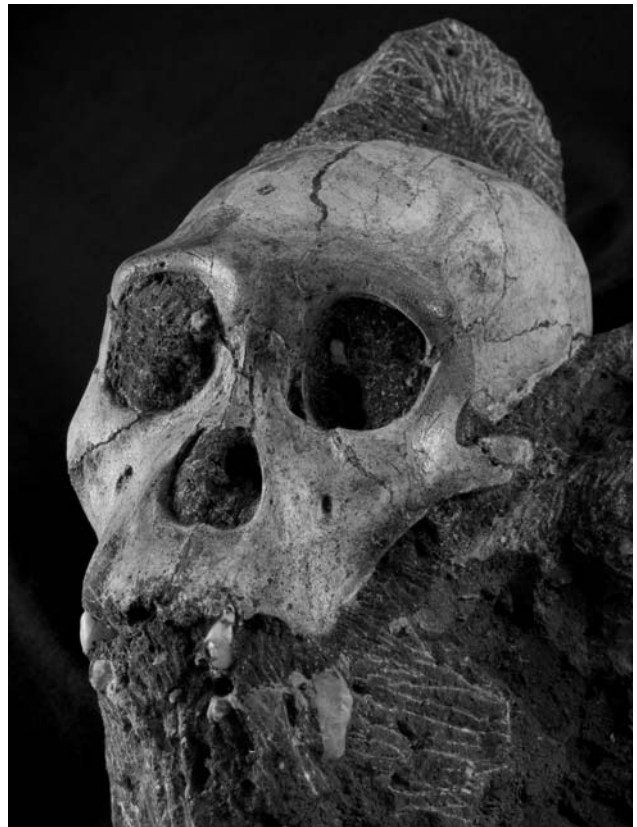
A team led by palaeoanthropologist Professor Lee Berger from the University of the Witwatersrand has described and named a new, almost two-million-year-old species of hominid, *Australopithecus sediba*, which was found in the Cradle of Humankind World Heritage Site near Johannesburg. Two papers related to the find, authored respectively by Prof. Berger and Prof. Paul Dirks, former head of the Wits School of Geosciences and now from James Cook University, Brisbane, Australia, were published in the journal *Science* on 9 April 2010.

'*Sediba*, which means natural spring, fountain or wellspring in Sesotho, was deemed an appropriate name for a species that might be the point from which the genus *Homo* arises,' comments Berger. 'I believe that this is a good candidate for being the transitional species between the southern African ape-man *Australopithecus africanus* (the Taung Child, Mrs Ples) and either *Homo habilis* or even a direct ancestor of *Homo erectus* (Turkana Boy, Java man, Peking man).'

The fossils, a juvenile male and an adult female, were deposited within a single debris flow and occur together in a near-articulated state in the remains of a deeply eroded cave system. The sedimentary and geological context indicates that the timing of their death was closely related and occurred shortly before the debris flow carried them to their place of burial.

The species has long arms, like an ape, short powerful hands, a very advanced pelvis (hip bone) and long legs capable of striding and possibly running like a human. It is likely that they could have climbed. It is estimated that they were both about 1,27 m tall, although the child is expected to have grown taller. The female probably weighed about 33 kg and the child about 27 kg at the time of their deaths. According to Berger, the brain size of the juvenile was between 420 and 450 cc, which is small when compared to the human brain of about 1 200 to 1 600 cc, but the shape of the brain seems to be more advanced than that of earlier australopithecines.

'Through a combination of faunal, U-Pb and palaeomagnetic dating techniques, the age of the rocks encasing the fossils has been determined at 1,95 to 1,78 million years ago,' says Dirks. 'Cosmogenic dating was used to interpret the landscape formation and to determine the depth of the cave at the time.' The skeletons were found amongst the articulated skeletons of a sabre-toothed cat, antelope, mice and rabbits. They are preserved in a hard, concrete-like substance known as calcified clastic sediment that formed at the bottom of what appears to be a shallow underground lake or pool that was possibly about 30 to 50 m underground.



*The cranium of the juvenile skeleton of A. sediba*  
[Photo by Brett Eloff, courtesy of Wits University]

Fossil preparators have worked arduously over the last 18 months to extract the bones from the rock. About 60 leading scientists from around the world and tens of students have worked on the fossils and the most sophisticated scanning technology has been used. The site continues to be explored and more groundbreaking discoveries are expected.

The fossils are on public display at the Wits Origins Centre during May. Visit [www.wits.ac.za](http://www.wits.ac.za) for more information on the find and human evolution in general, as well as a documentary and images.

### **Sediba juvenile may contain shrunken brain**

A shrunken brain may potentially lie inside the fossil skull of *Australopithecus sediba*. The skull was mostly kept in the stone matrix it was found in to help keep the fragile fossil intact and preserve anything that might be left inside. To scan the fossil without breaking it open, researchers used X-rays generated at the European Synchrotron Radiation Facility in Grenoble, France. The energy range and image resolution from the X-rays generated at this synchrotron, a kind of particle accelerator or atom smasher, are capable of producing details going down to 700 nanometres. An extensive two-week-long investigation generated some 15 terabytes of raw

data, which once processed would result in a total of 45 terabytes or more final data, equal roughly to half as much data as collected in the Library of Congress.

Soft parts of the body normally do not fossilise. However, an extended low-density area in the rock still inside the skull could suggest brain tissue after bacterial decay. 'We saw this cavity near the frontal part inside the skull that had a strange shape,' said Paul Tafforeau, a palaeoanthropologist at the synchrotron facility. 'One way to explain that cavity is that when this individual died, it was mummified and the mummification made the brain shrink by losing water, leading to an odd shape. Later you had water with sediment come up, fossilising the individual and filling the brain case, but you still had that brain remnant inside.' If it is a shrunken brain, it is perhaps 1/20<sup>th</sup> of its original size and the shrinkage would make teasing apart its original structure virtually impossible and the possibility of it holding any useful amounts of protein, DNA or other biomolecules is slim.

Scans of the fossil's teeth to look at internal growth lines and structure could provide the precise age at death of the juvenile. 'In ape teeth about three to four microns of enamel are deposited every day on a growing tooth, so each day, you get one line about that thick,' Tafforeau said. By counting the lines, you can directly count the number of days the hominid was alive. By comparing his real age and his develop-

mental level, which is roughly equivalent to that of a 13-year-old modern human, scientists can shed light on the pattern of his life history. 'The rate of development is extremely important when it comes to the evolution of hominids,' Tafforeau explained. Modern humans have an extremely slow life history that is the key to the development of our brains, while australopithecines such as Lucy had more rapid ones, more like that of chimpanzees. 'The aim of the study of the teeth will be to see if *Australopithecus sediba* is still developing like other australopithecines, or if its development is already showing a tendency toward the genus *Homo*.'

Three fossilised insect eggs, each about 2 or 3 mm long, were seen within the skull, potentially hatching larvae that fed on the flesh of the hominid after death. Two eggs belonged to wasps and the third was a fly egg. In addition to the skull, many fragments of the skeleton, representing nearly 40 per cent of an entire body, were also analysed. 'We can use that data to create biomechanical models to help reconstruct their locomotion, to see if they went climbing in trees or walking on the ground,' Tafforeau said. This is only the second time ever that a complete skull of a hominid has been examined using powerful synchrotron radiation, with the first being the 6,5 to 7,5-million-year-old human-like, chimp-like biped Toumai fossil found in Chad in 2002.

LiveScience, 12/04/2010

## THE CAPE GALLERY



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**The Cape Gallery deals in fine art work by SA artists and stocks a selection of paintings depicting South African rock art.**



## The clay birds of Vukwe

Please allow me to draw your attention to the contribution of Rob Burrett, 'Vukwe: A Zimbabwe-type site in north-eastern Botswana' (Vol. 26(3) December 2009). One of the publications referred to, *The Zimbabwe-Monomotapa Culture in Southeastern Africa*, was written by HA Wieschhoff, not Weischhoff. To his generation he was known as Heinz (standing for Heinrich). To this day the book is one of the best analyses of the Zimbabwe question.

As mentioned by Burrett, Wieschhoff was part of the Frobenius expedition of 1928–1930 (see Frobenius' book, *Erythraea*, Berlin, 1931, 11). Burrett describes Wieschhoff as a person seeking support for 'the somewhat fanciful ideas of the eccentric, but politically well-connected leader, Leo Frobenius'. He may have been a somewhat eccentric person, but hardly any other researcher has ever collected more material on Africa as a whole and published more than Frobenius. Seen from our present-day perspective, his obsession with what he called *Kulturkreise* was somewhat fanciful, like those of Baumann, Ankermann, etc., but the idea that he was a 'politically well-connected leader' needs some explanation.

I wish to draw your attention to the clay-birds found by Wieschhoff in the ruin of Vukwe, of which he published drawings in his book. The same birds are shown in Frobenius' *Erythraea* (plate 50). The caption reads 'Bird in black-red ceramics (the size of a dove)'.

Girls initiation schools in southern Africa, especially those found among the Sotho and Tswana-speaking ethnicities (as well as related groups), were always held close to the tribal chief's wife of royal descent. Quite often the chief's wife was also responsible for the storing of grain. Members of the community had to deliver a certain amount of grain to the chief. This was not exclusively for the benefit of the chief and his court, but was to ensure that his subjects would not consume all the seed needed for the next season. In the case of a crop failure this reserve could also help to feed the population. Should it happen that the storage bins burned down, the amount of ash remaining would be considerable.

The position in which the birds of Vukwe, and for that matter those of Great Zimbabwe, were found would indicate that they were located at or near the homestead of the 'Great Wife', within which the girls' initiation court was placed.

Doves and crocodiles – especially the tail of this reptile – as well as phalluses and snakes formed an integral and inseparable part of these schools. It was of no importance of which material they were carved. Up to a few years ago, the kraals in which the schools

took place were made of branches and similar material in such a way that they completely shielded the girls from the outside. This fence was normally up to 2 m high, with longer poles in between on which were mounted carvings of different animals. The most dominant used to be doves, which, like in many other cultures, is often seen as part of a household, and its sad call is compared with that of a lonely girl.

The crocodiles were carved in such a way that only the tail could be recognised at the top of the pole, the head and legs being ignored. The poles had to be caressed with one hand every morning, at some places also in the evening. Such a pole can be seen in the Iziko SA Museum in Cape Town. The phalluses are carved from wood by women, often very realistically. I have seen only one carved in soapstone, which was kept together with a staff-of-office depicting a mask and was used by the leader of the group, who at the end of the school would mount the girls like a bull would do. Nowadays a corn cob is used in the same way. The snake is used to act as a reminder to distinguish between poisonous ones and those who embody an ancestor.

The poles may not be removed before they have fallen, usually as a result of termite activity. Only when they no longer cast a shadow can they be taken away. Normally they are then used as welcome firewood by neighbouring people. The phalluses are burned at the conclusion of the school.

A note regarding the Zimbabwe birds: We do not know if wooden ones existed as well. The soapstone birds were carved with woodworking tools. Soapstone is easier to carve than wood, but the slabs available to the carvers dictated the size and the position or posture of the birds.

Jurgen Witt, PO Box 700, Tzaneen, 0850

(This letter has been edited and shortened.)



## Europe's largest rondel enclosures

Czech archaeologists have uncovered four prehistoric rondel enclosures, two of which are the largest in Europe, in central Bohemia. The enclosures, of a circle or oval shape and usually 50 m to 200 m in diameter, appeared in Europe in the Neolithic period. Their inner space was not inhabited and they could have served for cult, military or trade purposes. Over 100 rondel enclosures have been uncovered in Europe to date. The largest enclosures uncovered are 214 m and 230 m in diameter. One was surrounded by four ditches, the biggest being 4,5 m deep and 14 m long.

Ceskenoviny, 09/11/09

# THE MAPUNGUBWE MUSEUM GOLD CONSERVATION PROJECT

Sian Tiley

A gold conservation project was initiated at Mapungubwe Museum in February 2008 with the primary aim of elucidating the gold ornaments, jewellery or animals that could be assembled from the fragments of gold foil contained in the Mapungubwe archaeological gold collection at the University of Pretoria.

From the time of their discovery in 1933, the gold collection has remained fragmentary, with the gold rhino, sceptre and headdress partially complete and professionally restored by the British Museum from 1999 and 2001. In the subsequent period the museum sought funding to restore the remaining gold collection. Early in 2008, Adam Fleming, a private donor, indicated his willingness to fund and support this valuable archaeological conservation project.

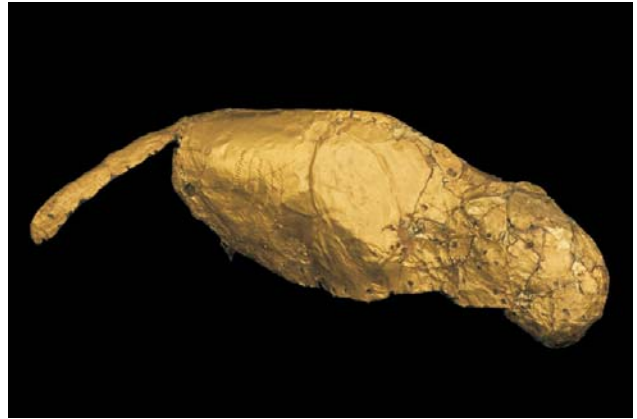


*The gold bovine painstakingly reconstructed as part of Mapungubwe Museum's Gold Conservation Project*

The securing of a legal permit from the South African Heritage Resources Agency granting permission for the restoration of the heritage objects led to a major logistical planning exercise. The South African Institute for Objects Conservation in the Eastern Cape was tasked with restoring the collection over a period of 18 months, at a cost of over 3 000 man-hours. As a pioneering gold conservation project in South Africa and the first of its kind applied to archaeological heritage objects, the results have far exceeded expectations.

The first step was to examine all existing research literature, the inventory, document damage, and the condition and provenance of the material. Then the fragments were sorted, weighed, counted and categorised in order to lay down a system of approach. Scientific analyses were conducted to examine the metallurgical structure of the gold so as to re-explore

the indigenous methods of manufacture. Thereafter interventive methods of cleaning, straightening, reshaping, fragment assembly, support and integration were performed.



*This gold feline now joins the famous gold rhino at Mapungubwe Museum*

The conservation project brought to light 460 restored gold objects. Mapungubwe Museum's gold collection now consists of 117 gold bracelets, 139 gold necklaces, 133 gold canular (cane-like) coiled anklets, about 40 fragmentary curious shapes, a few decorative three-dimensional gold foil forms, one gold sceptre and one gold headdress (bowl). Next to the famous gold rhino are two additional animals that have been painstakingly reconstructed, namely a sleek gold feline (possibly a leopard) and a gold bovine (see accompanying pictures). The Mapungubwe Museum Gold Conservation Project was recently awarded an additional donation by Adam Fleming for the research and conservation of several additional fragments.

The results of the conservation project were shown to the public in late 2009 at the Mapungubwe Museum's *Gold Treasures of Mapungubwe Exhibition*, but many of the key artefacts remain on public exhibition. The archaeological conservation research results are due to be published this year.



## FORGOTTEN CITY DISCOVERED

A circularly planned city, dating back 4 600 years, has been found in the Syrian enclave of Tall Qabr on the banks of the Euphrates, which together with the Tigris was the centre of the birth of civilisation in Mesopotamia. Galician archaeologists from Coruna University say the city is comparable in proportion to Pompeii and could represent the passage from the rural cycle to the urban cycle.

ANSAméd

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# BONE ART: THE KNYSNA SCAPULA

Hugo Leggatt

As a denizen of the Southern Cape, I was interested to read some years ago of 'the shoulder blade of a lion, with paintings on it', which had been found by Thomas Bain in a cave on Knysna's Eastern Head (Deacon 1979, quoting Bain). What made the report more intriguing was that this is the only painting on bone so far found in South Africa (Willcox 1963, Sealy 2006). It is known not to have remained in the country for long after it was found.

Willcox quotes John Goodwin as saying that it had been lent to the British Museum, but had been stolen on the return voyage. Willcox then goes on to report that he had seen a sketch of the scapula in Laurens van der Post's *Heart of the Hunter*. Following up this lead, he found that the original was still in the British Museum collection in the early sixties and was recorded as having been bought from Thomas Hedley in 1886. He described the paintings on the bone as 'not easy to identify, but including almost certainly a bird and a seal'.

It seemed to me a rarity worth looking for. The first opportunity arose in the fateful month of September 2001. Finding myself stranded in London two days after the attack on New York's World Trade Centre, I first visited the Natural History Museum in South Kensington, only to be redirected in the rain to the British Museum in Bloomsbury. It was not the best of times to be searching. People generally were nervous about what might be going to happen in London and, more particularly, the British Museum was in the throes of 'rationalising its collections', which meant that no one could tell me where I might look for an old South African bone, painted or otherwise.

After I returned home, the scapula came to my attention again in a 2006 paper on hunter-gatherers in southern Africa (Sealy). The author mentions Graham Avery's view that it was probably a seal scapula and surmises that the unusual characteristics of these marine creatures, including their need to breathe outside the water and the suckling of their young, might have marked them out as somehow special in the belief system of hunter-gatherers.

The year 2009 brought new opportunities. Dr Robin Catchpole of the Institute of Astronomy at Cambridge University kindly offered to try to find some leads and was able to send me an email which arrived only hours before I caught a plane to London. Apart from useful telephone numbers, the email included the website for the bone, [http://www.britishmuseum.org/research/search\\_the\\_collection\\_database/search\\_](http://www.britishmuseum.org/research/search_the_collection_database/search_)

[object\\_details.aspx?objectid=605854&partid=1](#), as well as the information that the bone might belong to an antelope.

My first full day in London found me on a bus to Shoreditch and eventually to an unlikely looking building near the Regent's Canal where the British Museum's ethnographic collection for Africa, Oceania and the Americas is housed. Here I was met by the very helpful Heidi Cutts, who has worked in the building for ten years and told me that no one had ever asked to see the scapula in that time. Nor, I would guess, for quite a while before that.



*The Knysna scapula, object of Hugo Leggatt's detective work*

The object of my search was neatly laid out on white paper in a box on a work table. The label attached to it confirmed Willcox's information on its acquisition and Catchpole's that it was an antelope scapula. The bone was re-measured and I was allowed to photograph it and handle it, which made me notice that it was remarkably light. Its width, length and socket size – 20 cm, 17 cm and 3 cm respectively – have now been recorded on the website.

And then it was time to go – an emotional moment. I felt the scapula was being well cared for, but it seemed sad that this unique specimen was boxed up so far from home. But that is not quite the end of the story. Bain had thought the scapula belonged to a lion, the museum had it labelled as coming from a large antelope and Graham Avery is reported as thinking it was that of a seal. It seemed that it should be possible to clear up this point.

I sent photos of the bone, its measurements and a description to Nonhlanhla Dlamini, a biological anthropologist, whose fascinating lecture on bones I had

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listened to at the University of Cape Town Summer School. Her response was: 'It's VERY much a seal scapula! The seal scapula has a characteristic fan-like shape along its medial border (the widest curved part of the bone). It's superior border is also rounded, with only its inferior border somewhat straight. There are almost two spines; the inferior one is false and less pronounced/marked.' She concluded that the noticeable lightness of the bone was important confirmation, as seals have very light bones for buoyancy.

So some aspects of the mystery are thus revealed. The Knysna scapula is in the British Museum and it belonged to a seal. Some points that remain unclear include whether there is significance in the fact that the bone is a seal's, and also why this is the only such art found in Southern Africa so far. The viewer is also

left to decide what the four paintings depict. From the left, the first could well be a seal, the second a bird and the fourth perhaps a fish, but clearly there could be other interpretations.

The latest news from the British Museum (December 2009) is that 'we are now planning to exhibit the scapula next year'.

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## TRANS-VAAL BRANCH CALLS FOR 2011 FUNDING PROPOSALS

The Trans-Vaal Branch of the South African Archaeological Society invites applications for funding by researchers and educators in the field of archaeology for the 2011 year. South African archaeological research projects and educational programmes that promote knowledge about and an understanding of archaeology will be considered. The deadline for applications is 31 August 2010.

Funding by the Trans-Vaal Branch may be split over more than one project and the branch committee's awards decision will be final.

#### Information to be included with applications

1. The archaeological research or education proposal, planned implementation schedule, total budget estimate, the grant amount applied for and the anticipated results or benefits.
2. If the project for which funding is requested forms part of a larger programme, information on how the project relates to the whole.
3. Resources and facilities available for implementing the project or programme.
4. A breakdown of the amount applied for into discrete expenditure categories to permit awards to be made for specific cost items.
5. Biographical details of the applicant(s), including academic qualifications, experience, professional affiliations and publications.
6. Two references attesting to the quality and success of previous archaeological or educational project work undertaken by the applicant(s).
7. Proposed publication of research results.

Successful applicants will be required to provide

six-monthly progress reports and a final project report. Applicants may be requested to prepare an article for *The Digging Stick* on completion of the project.

Applications should be forwarded to the Secretary, Trans-Vaal Branch, South African Archaeological Society, PO Box 41050, Craighall, 2024, or by e-mail to [secretary@archaeology.org.za](mailto:secretary@archaeology.org.za). Enquiries: Reinoud Boers, [fox@boers.org.za](mailto:fox@boers.org.za), tel. 011 803 2681.



## PREHISTORIC EUROPEAN CAVE ARTISTS WERE FEMALE

Inside France's 25 000-year-old Pech Merle cave, hand stencils surround the famed 'Spotted Horses' mural. For about as long as humans have created works of art, they have also left behind handprints. People began stenciling, painting or chipping imprints of their hands onto rock walls at least 30 000 years ago. Until recently, most researchers assumed these prehistoric handprints were male. But 'even a superficial examination of published photos suggested to me that there were lots of female hands there,' Pennsylvania State University archaeologist Dean Snow said of European cave art.

By measuring and analysing the Pech Merle hand stencils, Snow found that many were indeed female.

The same conclusion was reached concerning hand stencils dating back some 28 000 years in Spain's El Castillo cave. 'The very long ring finger on the left is a dead giveaway for male hands,' he said, while a long index finger and a short pinky is very feminine. His findings suggest women's role in prehistoric culture may have been greater than previously thought.

*National Geographic, 16/06/09*



# THE SOUTHERN AFRICAN INSTITUTE OF MARITIME ARCHAEOLOGY (SAIMA)

Bruno EJS Werz



Maritime archaeology was formally introduced to South Africa in 1988 when the University of Cape Town (UCT) created a lectureship in the field that enabled the development of a teaching and research programme. In the period that followed, several students in different departments were trained and received their degrees. Unfortunately, many of them, for economic or political considerations, later went overseas or took up other careers. The programme at UCT had to be disbanded a decade later owing to financial constraints.

From 1988 to 2002 the then National Monuments Council (NMC) and subsequently the South African Heritage Resources Agency (SAHRA) were assisted to improve shipwreck legislation and control. I served on different committees with these organisations and also became their first maritime archaeologist from 1991 to 1992, a position shared with UCT.

During this period a major project was executed, namely an extensive survey of shipwrecks around Robben Island. Code-named Operation Sea Eagle, the project was ordered by the national cabinet and undertaken together with the South African Navy. Another noteworthy project undertaken from 1990 to 1996 was the combined underwater excavations of the shipwrecks of the Dutch East India Company vessels the *Oosterland* and the *Waddinxveen* in Table Bay. Both ships sank during a violent storm in 1697 and research involving these ships represents the first scientific maritime archaeological project of its nature in this part of the world.

In 1998 it became clear that maritime archaeology in South Africa was in dire straits. No formally trained maritime archaeologist was employed at any institute of higher learning, or at the heritage agency. The pilfering and destruction of shipwrecks continued unabated and very little was done to educate and inform the public of the importance of protecting its maritime heritage. For these reasons plans were developed to create an institute for the study of South Africa's undersea heritage that could also assist the authorities in the protection of this heritage and educating the general public about this archaeological resource.

In 1999 the Southern African Institute of Maritime Archaeology, or SAIMA, was formally established. The then Chief of the South African Navy, Rear-Admiral Robert Simpson-Anderson, became the

Institute's Patron. The main objective of SAIMA is to study and preserve the maritime history of humanity, with an emphasis on the southern African region. Other objectives include –

1. to acquire knowledge pertaining to the field of maritime studies, with emphasis on maritime history and archaeology;
2. to establish and maintain a suitable infrastructure;
3. to create a multi-disciplinary research programme;
4. to establish a teaching programme; and
5. to create a public education programme.

## Administrative structure

It was decided to register SAIMA as a Section 21 Company, not for gain, which is a more appropriate format than a trust or society from an administrative point of view.

The institute is controlled by a board of seven trustees. Most of the current trustees were intimately involved in the creation of the institute. Nevertheless, it is expected that some of them will be replaced once SAIMA becomes fully operational. In order to provide a more balanced reflection of southern African society and to draw in additional expertise.

## Cooperation and support

SAIMA is not supported financially by government. This is unfortunate, as the institute concerns itself with the maritime cultural heritage of South Africa and other southern African states. This heritage is of national and international importance, a fact that has been acknowledged only relatively recently. Partly assisted by SAIMA, the national government, through the Department Arts and Culture, has been preparing since 2006 to ratify the UNESCO Convention on the Protection of the Underwater Cultural Heritage.

Very few people seem to realise that this nation in its present form mainly came into being through maritime contacts. The rich tapestry of our people, with their diverse ethnic, cultural and religious backgrounds, is a direct consequence of the ships that called here during the last 500 years. Without maritime traffic, the influx of people and the social integration that resulted from this, South Africa would not have had generations of coloured, Asian and white inhabitants with Muslim, Jewish, Hindu and Christian beliefs. Maritime archaeology is thus concerned with the history of all South Africans and many other world citizens who left their traces here.

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Dr Bruno Werz is a founding contributor to the field of maritime archaeology in southern Africa. He is currently director of SAIMA and research coordinator at the Department of History and Heritage Studies, University of Pretoria. [bruno.werz@telkomsa.net](mailto:bruno.werz@telkomsa.net).



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Tour price of approximately R22 662 per person sharing (subject to rand/dollar rate) is inclusive of airfares, airport taxes, hotel accommodation, certain meals, tipping, Egyptologist and Tour Leader.



The time period with which marine archaeology is concerned encompasses hundreds of thousands of years. In fact, the oldest artefacts ever found under the sea were located in Table Bay in 1995. These stone hand axes have been dated to between 300 000 and 1,5 million years old and were used by our prehistoric ancestors.



*A South African Navy diver reaches the surface after a joint survey with SAIMA*

It will be clear that underwater heritage deserves much more attention than it has received to date. Acknowledging this and stimulated by some of the results of SAIMA research projects, support has been forthcoming from such organisations as the SA Navy, the Council for Geo-science, Iziko SA Museum, the Southampton Oceanography Centre, the Bermuda Maritime Museum and the international Scientific Exploration Society. Their much appreciated support mainly concerns the exchange of scientific information and practical assistance with specific projects. Other organisations that should also be mentioned in this context are the Departments of Customs and Excise, and Marine and Coastal Management for the permits provided for practical research on and under the sea.

There is, however, a great need for financial support. A recent grant by the National Lottery Distribution Trust Fund has allowed SAIMA to acquire diving equipment. This has resulted in the formation of a specialised SAIMA Dive Unit. Most members of the unit are highly skilled professional divers, while others

include professionals in different fields and archaeology students. The Dive Unit is currently engaged in training sessions before embarking on research dives around the Cape coast.

### **SAIMA's plans**

In the years to come, SAIMA will focus on a specific research project called Operation Zembe. This will involve the search for prehistoric remains that are currently underwater as a result of past sea-level changes. The project was conceived after the discovery of the Stone Age tools in Table Bay. Besides this project, work will resume on sub-Saharan Africa's oldest shipwreck in conjunction with the Namibian government. The wreck of what is believed to be the Portuguese merchantman *Bom Jesus*, foundered near Oranjemund in 1533. Other wreck surveys and wreck excavations will also be undertaken. These projects will be executed as SAIMA projects, but the institute is very willing to assist other organisations, such as SAHRA, with the protection and assessment of underwater cultural resources. With its in-house expertise and with a well-trained team of professional divers, SAIMA is currently in the best position in Africa to undertake these tasks.

For additional information you are referred to the SAIMA website, [www.thesaima.com](http://www.thesaima.com).



### **SUBMERGED ARCHAEOLOGIST**

A message recently posted to an archaeological list announced that a Florida, USA, research team was 'seeking Submerged Prehistoric Archaeologists to complement our expanding Maritime Division'.

Hugo Leggatt, who supplied this titbit, thought that we might know of suitable ArchSoc members. Perhaps SAIMA Diving Unit members?

### **AUSTRALIAN CAVE PAINTING DEPICTS MARSUPIAL LION**

Modern Australia lacks big land predators, but until about 30 000 years ago the continent was ruled by *Thylacoleo carnifex*, the marsupial 'lion'. Several well-preserved skeletons of the leopard-size beast have been found. Now, a newly discovered cave painting in north-western Australia offers a glimpse of the animal's external appearance. It shows the requisite catlike muzzle, large forelimbs and heavily clawed front paws, as well as a striped back, a tufted tail and pointed ears. Previously known rock paintings hinted at marsupial lions, but were rudimentary and could have depicted the other striped marsupial predator, the dog-sized Tasmanian 'tiger'. That species succumbed to competition from humans in 1936.

*Antiquity/Live Science, 09/05/09*

## THE MAP THAT CHANGED THE WORLD

Just over 500 years ago, in 1507, Martin Waldseemüller and Matthias Ringmann, two obscure Germanic scholars based in eastern France, made one of the boldest leaps in the history of geographical thought – and indeed in the larger history of ideas. Near the end of an otherwise plodding treatise titled *Introduction to Cosmography*, they announced to their readers the astonishing news that the world did not just consist of Asia, Africa and Europe, the three parts of the world known since antiquity. A previously unknown fourth part of the world had recently been discovered, they declared, by the Italian merchant Amerigo Vespucci, and in his honour they had decided to give it a name: America.

But that was just the beginning. Waldseemüller and Ringmann in fact had written the treatise merely as a companion volume to their magnum opus: a giant and revolutionary new map of the world, known today as the Waldseemüller map of 1507. Drawn 15 years after Columbus first sailed across the Atlantic, it introduced Europeans to a fundamentally new understanding of the make-up of the earth and represented a remarkable number of historical firsts. In addition to giving America its name, it was also the first map to portray the New World as a separate continent, even though Columbus, Vespucci and other early explorers would all insist until their dying day that they had reached the far-eastern limits of Asia.

The map was the first to suggest the existence of what explorer Ferdinand Magellan would later call the Pacific Ocean. It was also one of the first documents to reveal the full extent of Africa's coastline, which had only very recently been circumnavigated by the Portuguese. Perhaps most significant, it was also one of the first maps to lay out a vision of the world using a full 360 degrees of longitude.

Waldseemüller recorded that 1 000 copies of the map had been printed, a very substantial number for the day, but the rapid pace of geographical discovery meant that copies of the map were soon discarded in favour of newer, more up-to-date maps of the world, and by 1570 it had all but vanished from memory. Fortunately, one copy did survive. Some time between 1515 and 1517, the Nuremberg mathematician Johannes Schöner acquired a copy, bound it into an oversized folio, and made it part of his reference library. It would not be roused again for some 350 years.

In 1901, a Jesuit geography teacher named Joseph Fischer stumbled across the Schöner folio in the library of Wolfegg Castle and in 2003 the US Library of Congress announced that it had acquired the map for the staggering sum of \$10 million.

BBC News

## The South African Archaeological Society

**This is the society** for members of the public and professionals who have an interest in archaeology and related fields such as palaeontology, geology and history. Four branches serve the interests of members. They arrange regular lectures and field excursions guided by experts, annual and occasional symposia, and longer southern African and international archaeological tours.

The Society was founded in 1945 to promote archaeology through research, education and publication. It is a non-profit organization – Registration No. 024-893-NPO.

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The Society produces the following publications:

- ☐ **South African Archaeological Bulletin**, a scientific publication of current research in southern Africa – twice a year
- ☐ **The Digging Stick**, the Society's general interest magazine – three issues a year
- ☐ **Goodwin Series**, an occasional publication on a specific field of archaeological interest

**Subscription rates for 2010** are as follows: Individuals: Single – R230; Joint/Family – R245; Junior membership – R160; Africa ordinary – R250; Overseas ordinary – R450\*. Institutions: Local and African – R450; Overseas – R850\*. [\* Plus R100 bank charges]

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