THE DIGGING STICK

Volume 34, No 1 ISSN 1013-7521 April 2017

THE KEY TO OUR FUTURE IS BURIED IN THE PAST
Philosophical thoughts on saving us from ourselves

Peter Nilssen and Craig Foster

Imagine a world without fame, famine or fear, a world without waste, wars and mass extinction. Hard to imagine, and yet our ancestors lived in that world. Is it too much to imagine that we could get back to such a world? If we do not, then our future could be in serious doubt.

If human behaviour is responsible for the current status of society and the quality of life on earth, and if archaeology investigates the development of human behaviour, then our discipline should be central to understanding the present and to guiding the future of our species and life on earth.

Recreation – early human family crossing a lagoon on the South African south coast

An abundance of scientific data shows that in the last few millennia humans have placed life under severe stress and are expediting the sixth extinction event. It seems obvious then that the thrust of current research should focus on securing our future. Archaeology can be a key player in that regard. If human behaviour has brought us to this point, and if science is suggesting that we are at the end game, then we have answers to the why and when. What remains unanswered is the how. How do

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Craig Foster has been a professional documentary filmmaker with his brother Damon for 25 years, working all over the world. They have received over 60 international awards for their work, including the Golden Panda, the 'Oscar' of natural history filmmaking. Their films have reached an audience of over one billion people. Craig has spent the last five years focusing on the prehistory of the human relationship with the sea. The work will link human origins with marine biology. He has in production a human origins exhibition created with archaeologists Christopher Henshilwood and Petro Keene.

OTHER FEATURES IN THIS ISSUE

we alter human behaviour to achieve function and sustainability?

The archaeological record is important because it is a road map of our development, with signs of where we have been, what we have done, what has worked and what has not. If our early ancestors survived and thrived in Africa prior to the introduction of food production and socio-political systems, then it is reasonable to suggest that their recipe for life worked. Currently our species is barely surviving and certainly not thriving; our recipe for life has failed. Maybe a glance at the past can provide some sorely needed wisdom and guidance. We are not suggesting a return to the Stone Age but rather a return to the original human ethos as a way to secure our future.

Perspective

So where exactly does 'mighty man' fit into the big picture? If you overlay the lifespan of the known universe onto a calendar year, then it starts with the 'big bang' in January, 13,7 billion years ago. Our galaxy forms in the month of May and our solar system and simple life appear in September. Complex life flourishes in the month of December, with humans making their appearance at six minutes to midnight on New Year's Eve. At two minutes to midnight some people migrate from Africa and at about 22 seconds to midnight the origins of agriculture and food production, as well as complex societies, emerge.

In real time, humans first appeared about 200 000 years ago and the origins of food production occurred some 10 000 years ago. This means that humans lived in and connected with nature for at least 95 per cent of our time on earth. It is only for the last five per cent or so that we have been manipulating nature for our own short-term benefit, to the long-term detriment of life in general. It is hardly surprising then that most of us find comfort, peace and joy in nature as opposed to the discontent associated with the sights, sounds and smells of industry and modern life. Our deep-seated relationship with nature, and 95 per cent of our genetic coding and heritage, is part of the original human design – gatherer-hunters are at the core of who and what we are.

!Kau Temi, a San gatherer-hunter in Namibia in 2002

Most humans live in complex societies that are largely disconnected from nature and are characterised by neuroses and countless dysfunctional behaviours. Depression alone affects more than 300 million people worldwide. At its worst, depression leads to suicide. Close to 800 000 people commit suicide every year and it is the second leading cause of death in 15 to 29-year-olds. It seems logical to suggest that we were designed to be a part of nature rather than apart from it, to be guardians and keepers of nature rather than gardeners and manipulators that resulted in our industrialisation. In some industrialised cities, nearly 40 per cent of children suffer from irreparable lung damage, while millions around the world die from air pollution every year. The roadmap of our development suggests that we succeeded when we lived in nature and that we are failing in living on top of it.

Masks help to deal with air pollution ten times higher than acceptable health limits in New Delhi, India

What distinguishes humans?

What sets us apart from other animals, what makes us uniquely human? Why have we created an industrial world, whereas animals have not? There are two primary aspects to humanness. The first involves our supposed advanced cognition, our ability to think and plan, our facility to develop composite tools, and to make sense of patterns and relationships in the world we occupy. We know of animals that use tools. Chimpanzees use 'fishing' sticks to extract termites from a termite mound. Birds drop shellfish or tortoises onto rocks to open them up for eating. Otters use stones to smash open shellfish to get to the meat.

But, although some animal species use tools, unless you teach them to do so, you will not find a chimpanzee binding together two sticks to make a longer fishing pole. This is what distinguishes us from other animals. Humans will take two or more separate components, ideas or observations and combine them to produce a single technology or a solution to a problem. We have the ability to make novel associations between separate items or ideas to create what we call composite tools. The bulk of our technology today consists of composite tools; the standard car has

25 000 separate parts.

The second characteristic that separates us from other animals involves symbolic behaviour. We know that animals use symbols, but they only do so to protect themselves, their territory and their reproduction. For example, African monkeys have a set of alarm calls for aerial or ground predators – each type of call is an auditory symbol of the species of predator they are warning about. Humans also use symbols for such reasons, but we take symbolic behaviour to a different level. We use it to express our position with respect to our understanding and perception of ourselves and the world we occupy.

We are constantly symbolling through the clothes and jewellery we wear, the cars we drive, the houses we live in, the music we listen to, and so on. We symbol who we are and how we fit into the world according to the model of reality that is imprinted in us. Many humans today are symbolling the level of 'success' they have achieved or would have others think they have achieved. The incessantly imprinted notion of a successful human being relates to the accumulation of external wealth and power. Institutions such as governments, corporations and most organised religions are huge on symbolling as well.

The start of symbolic behaviour was the first step towards creating the tools that led to our industrial life today. However, early humans used symbolism sparsely, whereas today we use it to such a degree that we have completely lost touch with what is real. Nature is real and immersed in nature we feel present and alive. Industrial city life is illusionary in comparison and disturbing at some levels to our primal design.

Comprehending and internalising this is critical for understanding the mind of our earliest ancestors, as well as for obtaining meaningful interpretations of the prehistoric archaeological record. Since the start of food production and the development of complex society our mindset is that of ego: self-seeking and intent on the manipulation and domination of nature. We are driven to the infinite consumption of finite resources. This situation is radically different from that which pertained in the prehistoric period. We can thus surmise that a major component of the human dilemma and a major cause of our failure to care for the environment results from our disconnection from it. We have clouded and forgotten the original human design, namely to fit in with nature.

Beliefs

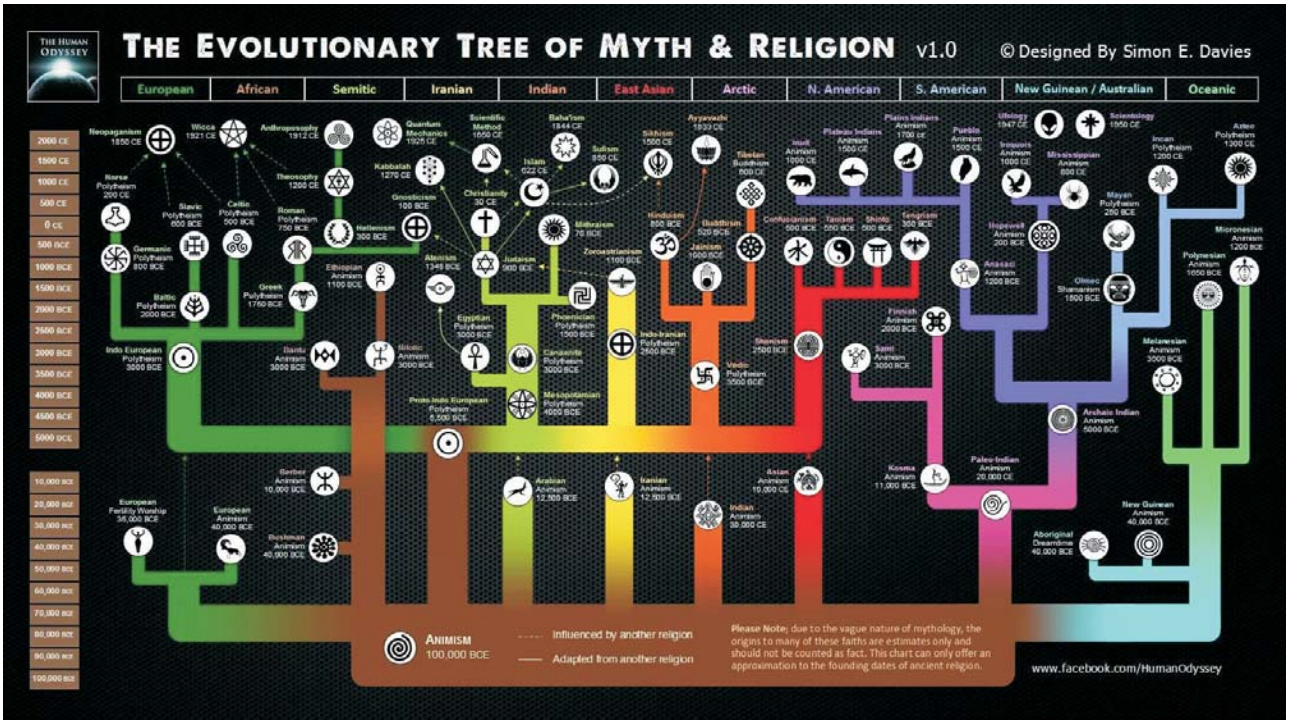
Prior to the origins of food production and before the advent of complex societies, the vast bulk of human societies based their belief systems in Animism. In this system, which is still practised today, a life force is attributed to everything that exists, including the elements, plants, insects, animals and earth itself. Everything is revered and considered critical to the chain of being. In the past, the belief system was mirrored in the experiences of the majority of indigenous people worldwide, all of whom practised community-based altered-state healing. As a practitioner's awareness expands, it is common to experience a profound lack of separation, where the entire known world is perceived as one sentient living form. This experience has been repeated across the ages.

Most of the world's great spiritual leaders report very similar experiences of oneness. This experience in many ways is much more real than normal wakefulness as the psyche's ability grows exponentially during heightened awareness. The so-called real world of everyday human existence often feels like an illusion in comparison with this expanded state. It follows that the behaviour of these early ancestors was guided by a reverence for and consciousness of all life, and that their very lives depended on a functional relationship with nature.

Central to Animism is the hunter-gatherer 'trance dance'. It is not the prehistoric equivalent of today's trance parties in which people take recreational drugs and dance to loud music. Rather, through repetitive rhythmic dancing to clapping-singing-chanting-percussion around a fire, the trance dancers aim to reach an altered state of awareness, which they describe beautifully as 'the little death', the death of the ego. It is during these altered states that people have visions of entoptic phenomena and therianthropes.

Entoptic phenomena in the Northern Cape

Therianthropes are beings or entities that are part human and part animal. Most people are familiar with the therianthropes represented in Egyptian art – human bodies with animal or bird heads. We know these creatures never lived and their appearance in rock art around the world is thus an oddity; they are unnatural, mythical. A second unnatural element in rock art, but one that also occurs around the globe, is entoptic phenomena. These include cross-hatchings, zigzags, nested curves, spirals and other geometric shapes. Entoptic phenomena are images not observed by the eye, but are generated internally by the brain, usually during altered states.



The roots of human belief systems are grounded in Animism – Oneness

During trance states people achieve the overview or connectedness effect that reinforces the belief system founded in Animism. People in trance connect with the spiritual realm and their ancestors, they obtain treatments for healing, guidance, teaching, wisdom and so on. These elements are then imprinted in the community and provide the basis for a functional relationship with nature. Because we find therianthropes and entoptic phenomena in art all over the world, this means that early societies were all reaching these elevated states of awareness and representing that experience through art, music, stories and other symbols. Since Animism is the best candidate for a global belief system before 10 000 years ago, we think that many symbols in art relate to Animism.

A Ju/'Hoan San trance dance in Namibia

Ancient evidence and our current status

Several South African Middle Stone Age sites dating to 100 000 or more years ago contribute to our understanding of our very deep human origins. The combined results of archaeological investigations into these sites reveal that early humans deployed advanced cognitive abilities and symbolled knowledge and belief systems guided by and connected to nature. The variety of entoptic phenomena on ochre, ostrich egg shell and bone suggests that these people were involved in altered-state practices and were very likely associated with Animism. Looking at our origins reveals that our early ancestors had at least two ingredients in their recipe for success, namely a combination of cognition (intelligence) and symbolic behaviour (beliefs or spirituality).

So, what is the contemporary standing of our species? The status of society and its constructs are a perfect reflection of great intelligence in the absence of wisdom. The overall emphasis on the development of intelligence and efficiency, and the near absence of authentic spiritual development has resulted in a notable and often crippling imbalance in the human psyche. The ingredient we have lost is the spiritual aspect of what makes us human. It is this spiritual bankruptcy, evidenced by fame, famine, fear, wars, abuse of everything and lack of reverence that has brought our species to its knees, that has robbed us of our humanness.

After food production, the evolutionary tree of belief systems becomes top heavy and complex, with the emergence of thousands of different religions and denominations. Christianity alone boasts several thousand denominations. Mostly these religions view humans as the pinnacle of 'evolution' who have the self-appointed right to dominate and control. This is in stark contrast to the ethos of Animism, which is still practised by many so-called primitive societies around the globe, who retain their connection with

nature and maintain a caring and gentle attitude towards life and earth. If Animism was the global belief system prior to food production and if we can push the beginnings of symbolic behaviour back to the emergence of humans, then at least 95 per cent of our genetic coding and heritage concerning belief systems relates to Animism. At our core we are all Animists, carrying remnants of a profoundly imprinted mindset and way of life based on a reverent and functional relationship with nature.

Peter Nilssen with visitors at the Middle Stone Age site discovered by him, Cave 13B at Pinnacle Point

The big question facing us now is whether it is possible for us to change? The answer lies with understanding our fundamental nature and behaviour. There are two primary drivers of human behaviour. The first involves an ancient portion of the brain known as the 'reptilian complex'. This is responsible for our instinctive behaviours for survival, such as obtaining nourishment, the fight or flight response, the drive to procreate, protection and so on. These behaviour patterns are fixed in us physiologically, as they are in all animals, and cannot be altered easily.

The second and more subtle driver of human behaviour is our knowledge and belief systems. The good news is that this feature is not fixed and can be altered since these systems are learned through the process of imprinting. The process of imprinting works through repetition. For example, we learn language through the repetition of a word and an associated object or concept. After a period of regular repetition, the word and associated meaning become imprinted in the conscious and subconscious minds. So, when we speak our mother tongue, we need not think much about individual words or their sequence, but rather think about the ideas or information that we wish to convey. The sequence and choice of words flow quite naturally by means of the subconscious mind. The same is true for learning the multiplication tables.

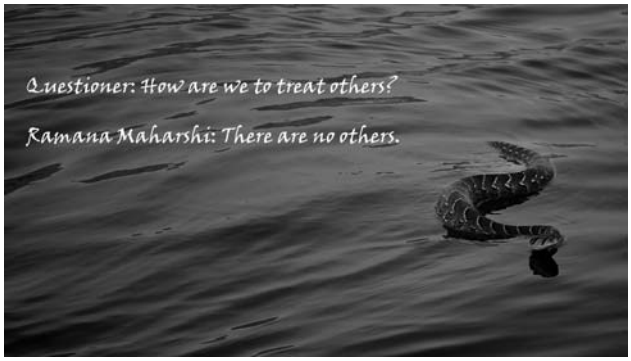
It is critical to understand that our habits and tendencies are driven primarily by the subconscious, not the conscious mind. It is the process of imprinting that is responsible for the palette of the subconscious mind with which our models of reality are constructed. Unlike the conscious mind, the subconscious mind does not discriminate between what is real and what is not, nor does it choose between what is functional and what is not. It will take whatever information it receives and work with it, creating a model of reality deep within us that drives our habits and tendencies. The world of marketing and propaganda is very familiar with these processes, and corporations use this characteristic of human nature to their advantage. The success of marketing depends on repetition, on imprinting, and because it works large sums of money are invested in this regard.

A demonstration that it works on the subconscious level was the use of subliminal advertising during the latter part of the 20th century. By inserting one frame displaying a product in every 24 frames of film, corporations could virtually compel their audience to consume specific products. In this process, the conscious mind misses the single frame, but the subconscious mind sees it and works with it. During interval, the subconscious mind induces the observer to purchase a product that the conscious mind never noticed. This practice is illegal today, but instead advertisers and manufacturers now invest millions of dollars to cunningly stimulate the subconscious. One basic example is the seemingly simple chocolate bar that has undergone enormous production and design. It explodes the sensory part of our brain with its texture, look, taste and smoothness, blowing the circuitry of a primal system designed to enjoy and moderate subtle taste and texture. Enormous self-restraint is required by our primal minds to resist the onslaught of this million-dollar deadly design.

Our knowledge and belief systems are imprinted in us from a very young age through our parents, peers, cultures, religious and education systems, and the mainstream media. We are imprinted with the notion that we are separate from everything, including nature and each other, and that we are successful human beings if we can accumulate external wealth and power. We are thus imprinted to be part of an ego-based consumer society with only a secondary regard for nature, the environment and fellow human beings. Our resultant behaviour is causing the death of our oceans and the onset of the sixth mass extinction. Humans are the single most dangerous mammal on the planet, responsible for more human deaths than any other, yet, ironically, very fragile compared with many other smaller species. Some scientists predict human extinction within a few hundred years unless radical change occurs in human behaviour.

All this relates to a tiny fraction – five per cent or less, or less than one per cent if we include the hominin lineage – of our time on earth. For the balance of our past we were imprinted with the notion of the interconnectivity of all things and reverence for life; it was these nature-based knowledge and belief systems that allowed our species to thrive. The inter-

connectivity of all, the law of one, as taught by spiritual leaders since the dawn of time, is now supported by quantum physics, which states that at the foundation of it all there is only one thing, a singularity, a unified field of energy, one intelligence, one consciousness. Everything is connected.



Spiritual leader Ramana Maharshi responds to a question

Hope?

Understanding that knowledge and belief systems are a major driver of human behaviour, and that these are learned rather than fixed, is a great source of hope. For this can result in transformed behaviour towards ourselves and the world we occupy. We can change our knowledge and beliefs on the individual level and make a difference as individuals. Every one of us is part of creating the collective human consciousness and we are either adding to the dysfunction and insanity or subtracting from it. A part of our role as individuals in transforming the present model of reality is to take responsibility for our lives and behaviour. We can no longer afford to hand this responsibility over to a 'father figure' like God, or government, or gold. Work in this direction is already underway and effective systems for imprinting already exist.

A further reason for hope is the concept of a tipping point, or critical mass. We do not need to change the more than seven billion of us to effect a change in human awareness and behaviour. Pilot studies suggest that only a small portion of a population is required to effect a change in the whole population. Several scientific experiments have yielded positive results, but further work must be done. Over 40 scientific papers document the Maharishi Effect, including that of 7 000 people concentrating on positive thoughts and energy and inducing a 72 per cent worldwide reduction in acts of terror, which is hugely encouraging.

This phenomenon can be explained through the hypothesis of a field effect of consciousness. It suggests an underlying connection between individual people in a similar way that physics has shown greater unity beneath the diversity of matter and energy fields. The more powerfully that underlying field is enlivened, the greater the unifying effect of peace and harmony on the surface levels of human existence.

Conclusion

The point is simply this: we stand at the tipping point: either we change our habits and tendencies, or our future is in serious doubt. Change is possible but it needs to happen now through a trans-disciplinary approach to answer the simple question: can we change human behaviour on a global scale and how do we do it? The archaeological record is a key part of the story as it indicates what behaviours worked for us in the past. Other environmental and behavioural sciences will illuminate the way forward.

Studies of our distant *Homo sapiens* ancestors reveal vital beings operating at a very high level of health and cognition. We have been sold the idea that these early people of our species were brutal cave dwellers, but the archaeological record paints a different picture. In many ways, early human behaviour was bright and vibrant. In comparison with this, the human of today is dull and broken, often a shadow of his former self in mind and body. But we still carry the same genes and have the same potential to overcome centuries of upheaval and mass extinction. We have a tremendous skill to transform and to work together in large groups for the good of all.

It is very likely our deep origins are rooted in non-violence and altruism. These are the traits that the great Mandela used to transform a nation. There is no reason it cannot be done on a global scale. In fact, it will most likely be a prerequisite if our species is to survive the next few hundred years.

ARCHAEOLOGY IN BRIEF

Central Turkey: 8 000-year- old female figurine

Catalhoyuk figurine dating to 8 000 years ago (credit: Jason Quinlan, Stanford University, via Associated Press)

Whoever she was, she had achieved celebrity status. At Catalhoyuk, the largest and best preserved Neolithic and Chalcolithic protocity settlement in Turkey, archaeologists have discovered a rare stone figurine of a woman about 8 000 years old. Only a handful of statuettes of the era have been found in one piece. The 177 mm high figurine was found beneath a platform with a piece of obsidian, which suggests that it may have been placed there as part of some ritual. Such figurines are often thought of as fertility goddesses. The archaeologists, however, suggest the object represents older women who have achieved status. A Unesco World Heritage site, Catalhoyuk was occupied from about 6300 BC to 5500 BC. Archaeological research has been conducted there since 1961.

Associated Press, 19/09/2016

STORIES AND MYTHS ABOUT THE PRE-IRON AGE INHABITANTS OF SOUTH-CENTRAL AFRICA

Andrew B Smith and Keith S Begg

The interest shown in Khoekhoe origins (Morris 2014; Lombard 2014; Smith 2014a) and the assumption that domestic stock must have come overland from the north, presumably from East Africa (Smith 2016), possibly via the tsetse-free corridor from Tanzania through Zambia to the northern Kalahari (Smith 2014a) (Fig. 1), raised the issue of herders before Iron Age farmers and who might have been the people who occupied this possible transit route before food producers were on the landscape. The difficulties migrating herders might have met travelling through this area are worthwhile considering within the wider debate on hunters becoming and/or interfacing with pastoralists (Smith 2014b, in press).

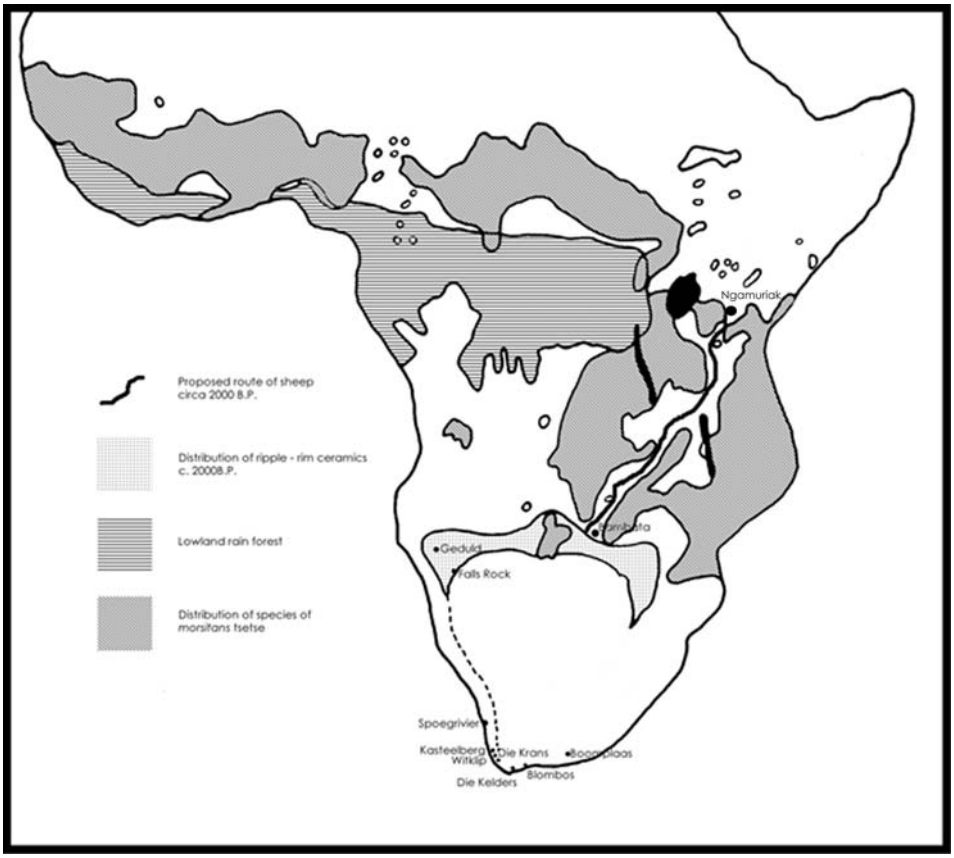


Fig. 1: Estimated route of sheep migration to southern Africa

Several writers have posed the question of who were the pre-Bantu-speaking inhabitants, and have come up with a variety of names, many of which are mythical creatures but might all refer to former hunters that can be partially identified in the landscape by archaeological evidence such as stone tools and rock art (Clark 1950; Rangely 1963; Phillipson 1977; Smith 1995, etc.). How these people may have been affected by the movement of domestic animals some 2 000 years ago can only be conjectured, but this has provoked the present inquiry into what memory still exists of the aboriginal inhabitants.

Keith and Colleen Begg are carnivore conservationists who have spent most of the past 15 years living in the Niassa National Reserve of northern Mozambique. During this time, Keith interviewed some of the elders who live in the Mbamba village about what is known of the people who lived in their area before the Bantu-speakers. The following are some of the comments made during conversations with three of the most respected Cyao elders in the village (Mustafa Ali, Correia Momade and Mauricio Janga) on 4 March 2017:

'To this day there still exist groups of small, hairy pygmies that live in mountain caves and *malambo* (a Cyao word referring to marshland). They are very difficult to see and should be avoided. More often their voices or drums may be heard in the forest but they are seldom ever seen. Their drums have been heard near the *Chiangwasi* islands and the *Mantendano* mountain along the Lugenda river.

'Their entire bodies are covered in long hair and they eat honey and wild fruits. The fruit of the *masuku* tree (Sugar Plum: *Uapaca kirkiana*) are commonly associated with the pygmies. Groves of these trees are most common in the Mavago and Matondovela area, especially along the Oizulo du Jao mountain inside the Niassa National Reserve. These pygmies are not associated with eating meat.

'Encounters with the pygmies are considered dangerous. People in Mbamba village have been led

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into the forest in a drugged like state for two or more days at a time. When these individuals are eventually found or return to the village they have *SIDA* (HIV/Aids) and remain sick and or mentally disturbed for the rest of their lives. Recent examples are Sn. Ecope (his legs were severely injured) and Sra. Maria Jaape.

'Mr Mussa Muetika, also from Mbamba village, once found a large bee hive in an *nsolo* tree (Kuduberry: *Pseudolachnostylis maprouneifolia*). After raiding the hive, he sat down to eat the honey ... but he was then called by a pygmy who attacked him and took away all the honey. It is considered prudent to pray to the ancestral spirits (*Chonde-chonde* ceremony) to ask for protection before raiding large or important beehives like those found in baobabs, mountain cliffs and caves, etc.'

Fig. 2: Baboons among Cyao Mozambican and Tanzanian traditional leaders and pilgrims gathered at the CheMambo sacred site, Niassa National Reserve, Mozambique (photo Keith Begg)

The general feeling is that the fisher-hunter Batwa people identified by Brelsford (1946) and Maclaren (1958) are the basis of these myths, as well as fears that abound about mountains, caves, pools, large trees, etc. where *majini* (spirits) are assumed to live. The stories offered by the Mozambican elders resonate with similar tales collected elsewhere in south-central Africa. The small hairy people of Mozambique seem to be the same as the Akafula of central Malawi, who are described as '… small of stature, very black, hairy and sometimes bearded, and with a quite unintelligible language' (Clark 1950: 84). Clark (ibid.:82) also mentions a description among the Lala who live west of Lake Malawi of 'people called *Mumpi* who live in the hills but cannot be seen.'

The name Twa or Batwa appears to be a general term used for the pre-Bantu-speaking peoples of south-central Africa north of the Zambesi. It has the general meaning of hunters or hunter-fishers and would be the equivalent of Bushman in southern Africa, i.e. people living off foraged food without domestic animals. There are other local names like Amwambonela, Mwandionera Kuti, Mumpi (Utunuta mafumo), Utunkula mafwesa, Utuntele mafasa, Utunka twa Mulungu, Mbolela pano and Hukwe, all of which refer to small people and are often built into myth. The names used to refer to these people in Niassa are Pigmeus (Portuguese for pygmies), iTove (Cyao language), Mbilikimo (Swahili, direct translation for pygmies) and Namamchepani (Makua).

The hairiness is interesting. The Beggs have filmed a pilgrimage to a sacred pool in Niassa by local villagers (*Spirit Creatures: Niassa's invisible realm*, 2014). The pilgrims interface with resident yellow baboon (*Papio cynacephalus*) troops around the pool. These animals are given the status of ancestors, and are fed and not disturbed. In fact, the baboon troop wanders in and out of the human group quite freely with no antagonism on either side (Fig. 2). One might imagine a baboon in the shadows of a cave being mistaken for a spirit being.

Although there are stories about these small people, little is known about who painted the rock art, at least in northern Mozambique. This may be because the ones who made the paintings have disappeared from the landscape or were absorbed by the Early Iron Age farmers, with the memory of them being expunged over time. Ben Smith (nd) has described the rock art of central Africa as being 'pygmy'. His interpretation, using Turnbull's (1962) work on forest pygmies, is that one can separate this art by gender into male animal image art for creating harmony with the forest, and female representational/geometric art representing women's initiation ceremonies. Both these styles may exist in the same cave, but were kept separate. The finger dots shown on the rock above the sleeping lion in Fig. 3 would be representational.

Rock art sites would have been places of power. We know about the relationship between sorcerers and lions in Bushman belief (Hollman 2004). Is there any reason to think that hunters north of the Zambezi would have any less potent beliefs? Where in the pantheon of sorcery might we place a lion that sleeps under an overhang with rock art (Fig. 3)?

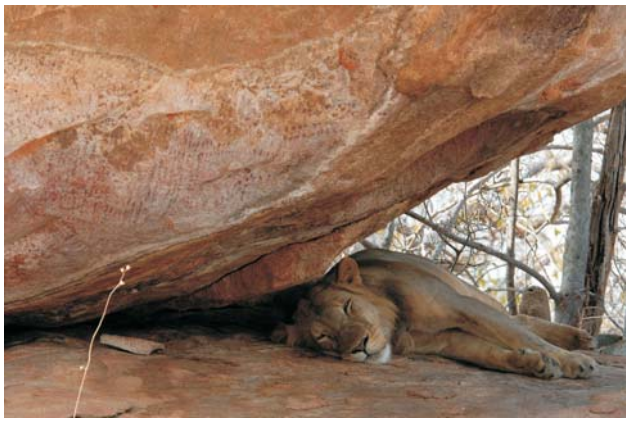

Fig. 3: Lion sleeping beneath rock art in the Niassa National Reserve, Mozambique (photo Colleen Begg)

Discussion

There is obviously no way of knowing how the people occupying the tsetse-free corridor would have dealt with herders arriving from the north. The country that the herders travelled through would have been the exploitation territories of local people. Strangers passing through could potentially have been very disruptive and unwelcome, unless they asked permission to use the resources temporarily. It is possible that the narrow corridor was like a wind-tunnel, through which the pastoralists would push quickly to be debouched at the southern end where they could move over much larger areas and along rivers.

Although the names given to the mythical people vary from group to group, they all seem to refer to similar beliefs in a small and often hairy people. Thus we may have to accept the possibility that, other than their archaeological artefacts, this may be all that remains of a people who lived for thousands of years in south-central Africa. The collection of stories is extremely limited and needs to be expanded by anyone working in this vast area.

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1852–1883: ARTEFACTS OF DEFIANCE IN LIMPOPO–MPUMALANGA

Revil Mason

Defiance artefacts in Cave of Hearths, Nyabela KoNomtjabelo and Zambok zyn Grond

From 1850 to 1883 Limpopo and Mpumalanga Ndebele armed themselves with guns and built stone walls with loopholes to counter Boer seizure of land and slaving in their homeland. In 1852, the Magaliesberg Ndebele led by Chief Sambok defied Andries Pretorius with guns and stone fortifications. In 1854, the Makapan Ndebele led by Chief Mokopane defied Paul Kruger in the same way and paid a heavy price. In 1883, the KoNomtjabelo Ndebele led by Chief Nyabela defied Piet Joubert and paid a heavy price.

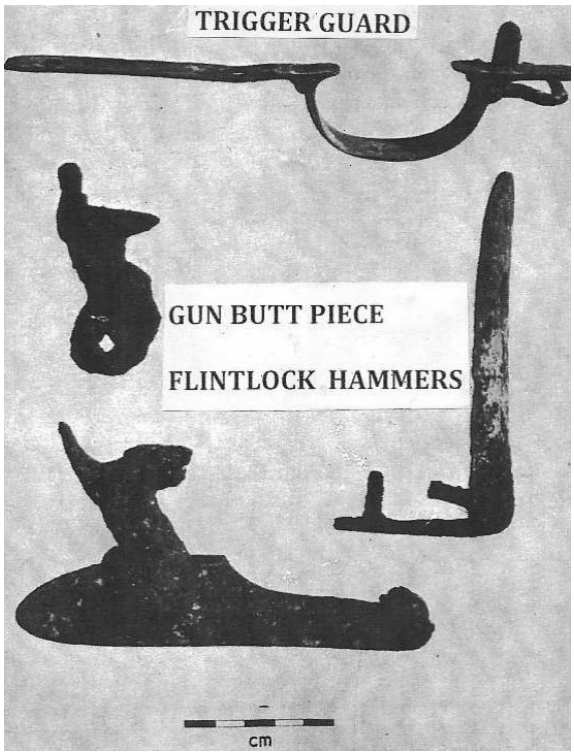
I suggest the class name for artefacts from these sites be Defiance Artefacts. The Limpopo-Olifants river basins are a rich field for research with regard to defiance artefacts. In 1953, I joined Peter (Clarence) van Riet Lowe's South African Archaeological Survey, which also ran the Historical Monuments Commission (NMC). My colleague, Berry Malan, took me to a National Historical Monument site then known as 'Mapogs Grond' near Roossenekal in Mpumalanga. Today the site is known as Nyabela KoNomtjabelo.

Nyabela KoNomtjabelo

This site has spectacular caves and hills fortified by the Ndebele in the 1870s. In 1883, General Piet Joubert defeated Nyabela and his Ndebele at the stronghold of KoNomtjabelo (Saks 2008). Malan's NMC in the 1940s proclaimed the site, as well as the archaeological deposits in nearby caves and stone walled fortifications, a monument. Artefacts from the site, including gun parts and trade goods, were in 1957 put on display in the Wits Archaeology Museum at the Van Riet Lowe Building.

In that year, I photographed some of the site's impressive stone-walled fortifications, including walls loopholed for guns and some of the collected artefacts (Mason 1962). The loopholes measured 120 by 250 mm, similar in size to the loopholes in British 1900 Rice-pattern blockhouses in the Magaliesberg. I found a rectangular clay-walled iron furnace reflecting 19th century tradition behind a well-built loopholed stone wall. Gun parts and other artefacts had been found in ashy deposits inside the walls. They included the brass stock and trigger guard of a musket loader and steel firing hammers.

Stone-wall fortification with loopholes

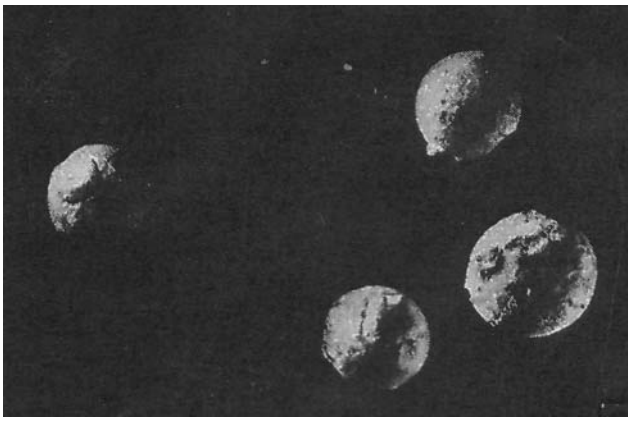


Gun parts found inside walls

Archaeologist Revil Mason studied economic history under Helen Suzman at the University of the Witwatersrand in 1948, Southern Sotho under Robert Sobukwe at the University of Cape Town in 1951, social anthropology under Monica Wilson and archaeology under John Goodwin. His attention then focused on historic socio-economic changes in South Africa, leading to his 1964 paper 'Origin of South African Society' (*SA Journal of Science* 1965). revmason@vodamail.co.za

Makapansgat Cave of Hearths Bed 12

In 1953–54 I excavated the Makapansgat Cave of Hearths for van Riet Lowe. On the first day of my excavation in April 1953 I found Hearths Bed 12 adjacent to the 1854 Kekana Massacre Cave. Bed 12 preserved a mass of Iron Age-style artefacts, including trade goods, a butt stock and steel bolt of a muzzle loader and four lead ammunition balls obviously dating to the 1854 massacre. The mass of potsherds in Bed 12 may predate the massacre, testifying to an earlier Kekana refuge event in Gwase. The four musket balls and flintlock butt bolt are evidence of Ndebele defiance in response to Boer aggression.



Lead ammunition from Cave of Hearths

Prof. I Hofmeyr kindly contributed Chapter 8 – Oral and written versions of the Makapansgat siege – to my book entitled *Cave of Hearths* (Mason 1988). Hofmeyr wrote: 'From the 1840s Ndebele clans living around Potgietersrus (now Mokopane) … were exposed to Boer demands ... for cattle and children … and ivory ... by 1854 two Ndebele communities, the Langa under Mankopane and the Kekana under Mokopane ... murdered 28 Boers. The Boers responded by calling up a commando. The Kekana ... took refuge in the caves (subsequently named Gwase). By the end of October 1854, the Kekana with firearms and provisions had dug themselves into the caves and built defensive stone ramparts … the Boers attempted a direct attack on the caves ... then began a blockade. On November 6, Piet Potgieter was shot ... On November 17, a Boer patrol entered the cave ... nearly overcome with the stench of decomposing flesh ... the Boer commando took 2 000 cattle, sheep and goats and 700 prisoners as booty.'

Zambok zyn Grond

In 1973, I met the van Genderens of Broederstroom Observatory. Arnaut had discovered the Early Iron Age site I was to excavate. Stannie was interested in Magaliesberg history and gave me a translation of a report by Andries Pretorius (1852) on his attack on Sambok's Ndebele at Zambok zyn Grond, 50 km north of Broederstroom. Andries Pretorius' farm Grootplaas extended from just north of Broederstroom to 10 km west of Broederstroom.

Andries had been commander of the Boer laager at Blood River in 1838. He wrote a fluent account of his 1852 commando raid on Chief Sambok's fortifications at Zambok zyn Grond in Ga-Rankuwa. Sambok was a member of the Kekana family who in 1854 led the Ndebele people into the Makapansgat Massacre Cave 'Gwase'.

One hundred horsemen followed Pretorius to parley with Sambok at his stone-wall fortifications on a hilltop north of the Magaliesberg. Pretorius recorded that 'Sambok had made preparations to go to war. He built one big strong wall on a randberg and one with underground cellars round a dangerous koppie. *All walls are well equipped with loopholes.* I spoke to Sambok and told him not to go to war against the Boere – that he would not be strong enough. Sambok answered with a sneering smile and told me he was ready to fight. He would prevent all Boere from getting a handful of salt from the pan [Tswaing, just east of Zambok zyn Grond] and would prevent hunting – and we would have to … leave the Magaliesberg.'

Like his Ndebele neighbours at Makapansgat, Nyabele Sambok was defying Boer authority imposed after Blood River. Pretorius' diary record continues: '… Sambok let fly a couple of shots at us. One of his bullets hit Mr J van Nukerk in his coat. I ordered some men to start firing and had the first wall stormed ... they fled into the holes ... I offered peace and they accepted ... I found Sambok's seven new rifles ... judging by the shots fired at us there must have been more rifles ... I went to neighbouring people and found that Malook is in possession of 66 rifles – as soon as they possess arms they cease to keep the peace.'

Excavations at Zambok zyn Grond

In the 1970s to 1980s Tom Maubane worked with us in the Archaeological Research Unit at Wits. He happened to have been born at Zambok and had seen the stone walls. I found that aerial photos of Zambok showed both rock ridges and Late Iron Age (LIA) village walls next to a stone ridge and koppie, which matched Andries Pretorius' 1852 description. Consulting van Riet Lowe's 1936 Accession Register, I identified the Sambok site as 'Site 54/75.'

Lewis Matiyela, 'South Africa's first Black archaeologist' in the 1970s, was doing an MA in archaeology at the University of Cape Town and came to us from 1973 to 1975 for field experience at the Suikerbosrand excavations. I took Lewis to Zambok to do a trial excavation for his thesis, hoping that he would find defiance artefacts next to a koppie with rock outcrops matching Pretorius' description. Lewis laid out a 5 m by 3 m grid. He did not find defiance artefacts, but did expose the foundations of a massive 1 m wide stone wall parallel to a stone randjie next to a koppie that resembled the description by Pretorius.

Lewis Matiyela with his trial excavation grid at Zambok

Lewis also found LIA potsherds impressed with linear patterns similar to the nearby Tafelkop and Uitkomst Cave pottery (Mason 1962), a rusted fragment of an iron rod, pieces of a decorated abraded-edge ceramic sherd that could possibly have been used to scrape hides, and cattle bone fragments. Lewis' finds showed that there were numerous and varied bones and teeth at the site possibly dating to Sambok's occupation in the 19th century. Site 54/75, for this reason, is worthy of large-scale excavation. Both the Sambok and KoNontjabelo sites deserve archaeological and historical investigation.

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ARCHAEOLOGY IN AFRICA

Roadworks unearth huge treasure trove of fossils

Fossil species that have not been documented by scientists before have been discovered during construction work on the N2 highway near Grahamstown. 'A number of new invertebrates, as well as excellently preserved plant fossils of the Devonian era, have been excavated and discovered in rock debris of the Witpoort Formation between Grahamstown and the Fish River,' said SA National Roads Agency (Sanral) environmental manager Mpati Makoa. Renowned palaeontologist Dr Robert Gess said the discovery was significant because many species had not yet been documented by palaeontologists.

The Devonian era lasted from about 416 million years to 354 million years ago and is often referred to as the 'Age of Fishes' because of the varieties of fish spawned during that time. The fossilised remains found are of life in a marine coastline environment when South Africa was part of Gondwanaland, nearly 360 million years ago. 'To advance scientific discourse and original research contributions of SA palaeontology and heritage scholars, we made provision in the environmental management programme for specialist examination and excavation of rock debris,' Makoa said.

According to Gess, the plant and invertebrate fossil discoveries are from ancient open river mouth ecosystems. 'It differs from the fossil discoveries of the closed lagoon ecosystem of Waterloo Farm, an important palaeontological heritage site of the late Devonian period which is 20 km away from the current excavation site. The discovery is significant as palaeontological research and scholarship on marine ecosystems of the Devonian period was primarily anchored in the fossil discoveries of Waterloo Farm. Now, we are able to trace a much broader picture of life along an ancient coastline,' he said.

The remains of a shrub-sized *Iridopterid* plant were collected, as well as a number of lycopods and *Zosterophylopsid* plants. Complete specimens of the fronds of the *Archaeopteris notosaria* tree were also collected. New marine invertebrate fossils also came to light, including a bivalve never before found.

News24, 01/07/2016

Scientific breakthrough after turtle fossil found

A fossil discovery by an eight-year-old South African boy has helped scientists redefine why turtles have shells. While it has generally been accepted that the turtle shell is largely used for protection, a new study by an international group of scientists, including those from the Evolutionary Science Institute at Wits University, suggests the broad-ribbed proto shell was initially an adaptation not for protection, but rather for burrowing underground to escape the harsh South African environment. The breakthrough came with the discovery of several specimens, the oldest of which was a 260-million-year-old partially shelled proto turtle, *Eunotosaurus africanus*, in the Karoo.

Several of these specimens were discovered by two of the studies' Wits co-authors, Dr Roger Smith and Dr Bruce Rubidge, but the most important specimen was found by Kobus Snyman on his father's farm in the Western Cape. This 15 cm long specimen comprises a skeleton with fully articulated hands and feet.

The early evolution of the turtle shell had long puzzled scientists. They knew from both fossil record and observing how the turtle shell develops in modern turtles that one of the first major changes towards a shell was the broadening of the ribs. While this may not seem like a significant change, it has a serious impact on both breathing and speed in four-legged animals. Ribs are generally pretty boring bones; turtles are the one exception, where they are highly modified to form the rest of the shell. *News24, 19/07/2016*

A METAL BUTTON ASSEMBLAGE AS A SYMBOL OF TRADE AND ADOPTED CULTURE IN THE EASTERN CAPE

Debbie Palk

Between 1988 and 1991 research was completed in the Eastern Cape on the architecture of the setter towns of Salem and Grahamstown. This body of work, completed mainly by Scott and Deetz (1990), Winer and Deetz (1990), Winer (1994) and Scott (1987), is collectively known as the Eastern Cape Historical Archaeology Project. In the late 1980s Patrice Jeppson completed her PhD research at four Eastern Cape sites falling within this body of work.

Jeppson's sites, located within a 40 km radius of Grahamstown, are representative of the diverse population groups resident in the Eastern Cape in the early 19th century, and highlight the social interaction of British settlers, the military, missionaries, farmers, herders and previously indentured slaves. The sites are a Wesleyan Mission Station (Farmerfield), a British fortification on the frontier (Fort Double Drift), a street site in Grahamstown close to the main trade thoroughfare (Huntley Street), and a settler homestead (Pigot Park).

After the completion of Jeppson's (2005) research, the artefacts were accessioned to the Albany Museum. They have remained in storage since this time, with only minimal additional research being done on the collection. In the extended research (2017, in progress) the glass and metal artefact assemblages from three of the four research sites are being used to study trade in the Eastern Cape and on the Eastern frontier between 1820 and 1860. Pigot Park was excluded from the research as it was felt that the Grahamstown street site would provide a clear indication of the actions and preferences of the majority of the British settlers. Jeppson already recognised that the street site could serve as a control sample from which to analyse the rest of the sites.

Trade in the Eastern Cape was influenced by the distance of products from their manufacturing source. Sherratt (2010) emphasises that it is not only distance that powerfully influences the imagery evoked by a trade item. It achieves added potency by perceptions of where the items have come from and who has brought the item into the colony. Kelly (2010) adds that access to such items led to a 'manipulation of the circulation of material culture', which affects the way people interact to obtain the items. As a result, a 'social power' is formed during the trade transactions. The material culture in the Eastern Cape exhibited all of these circumstances. The goods arrived in the Cape colony by ship and from there the goods were transferred and transformed by the time they reached Grahamstown and the interior.

This article focuses on trade at the Wesleyan mission at Farmerfield and highlights part of the metal artefact assemblage found at the mission. Farmerfield was established after the parishioners in Salem approached their minister, Reverend William Shaw, to find out if the church would be prepared to purchase land on their behalf:

*'In the year 1838 there arose a strong desire on the part of many of the natives connected with our congregation in Graham's Town, to leave that place, and go to some of the settlements, where they would have the privilege of keeping cattle, and possess more extended lands for cultivation than they could obtain in town … But at that period the Colonial government could not make up its mind to any decided course of action for securing the legal rights to building and garden lots for the natives of our congregation' (*Shaw 1872:34, Book 2*).*

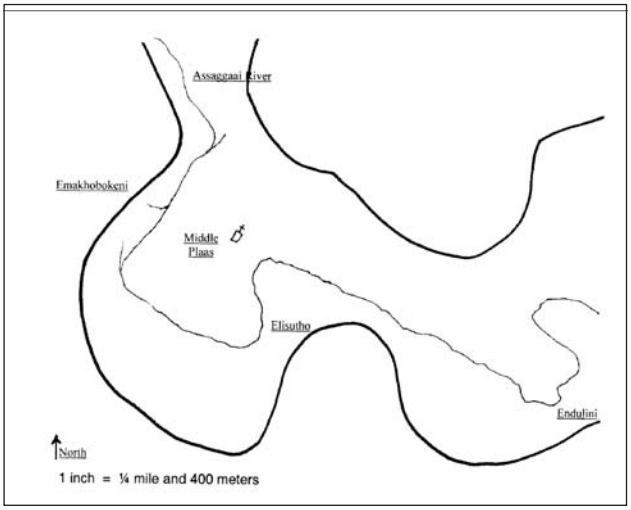

Fig. 1: Map of the four hamlets drawn by Patrice Jeppson from oral testimony (Jeppson 2005:162)

Because of the reticence of the Colonial government, the Wesleyan church purchased the farm *Klipheuwel* to establish a mission station. The farm, renamed Farmerfield, had a unique location. Unlike the mission stations established in the interior, this mission station was located in close proximity to Grahamstown and Salem. Farmerfield was divided into four sections or hamlets based on the perceived cultural differences of the mission residents. Jeppson (2005) was able to compile a map of the layout of the mission based on

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the oral testimony of the descendants of the original mission residents. Fig. 1 shows the prominent position of the church in relation the rest of the hamlets.

One hamlet, Embakhobokeni, housed the emancipated slaves, freed indentured slaves and Prized Negroes. The former slaves formed part of the original Cape slave population, imported to the Cape from Madagascar, Mozambique and Angola. The Prized Negroes came from slave ships confiscated in British waters after the transportation of slavery was no longer permitted. Another hamlet, Endulini, housed the Xhosa-speakers, descendants of an Nguni-speaking, farmer-herder society. Elisutho housed the Sotho, Basotho and Bechuana immigrants, and Middel Plaas was where the missionary family resided and the chapel, school and manager's house were located (Hewson 1981; Jeppson 2005; Sadler 1967; Shaw 1872).

Tenants of all four hamlets had to conform to the strict terms of the leases they had to sign on arrival at the mission. While the hamlets outwardly displayed rectangular European building styles and neat gardens, the assemblages excavated have highlighted the cultural differences that originally led to the division into different hamlets. The artefacts recovered demonstrate the cultural differences between the hamlets, and, considering the proximity of the mission to the settler towns, also indicate the existence of trade between the mission and the towns.

A last significant difference between the tenants resident at Farmerfield and those resident on mission stations in the interior is that the former actively sought a place to stay and to farm. As a result, the tenants were able to use the money they earned from labouring on neighbouring farms to pay off their rent in the first month of each year. Thereafter they then had surplus cash with which to purchase wagons and livestock.

In the minutes for the meetings of the Wesleyan church it is possible to trace how successful the tenant farmers were at the mission (Cory Library-MS 15.023/2):

'We have here 63 families all industriously employed according to the laws of the Institution in the different pursuits of this rising establishment. The population consists of 296 individuals of whom 63 are males resident as heads of families and have been servants, 68 are female, 81 are Girls, and 78 are Boys. They possess 935 horned Cattle, 106 Goats, 232 Sheep, and 10 Horses … They have during the Year enclosed cultivated 148 Acres of rich land, which has produced 24 Muids of Wheat, 6 Muids of Barley, 218 Muids of Indian Corn besides Potatoes, Onions, Peas, Beans and almost every garden vegetable the quantities of which could not be ascertained. Among the people settled here we have 3 Couriers, 5 Wagon Drivers, Gardener, 2 Masons, Shoemaker and Thatcher …'

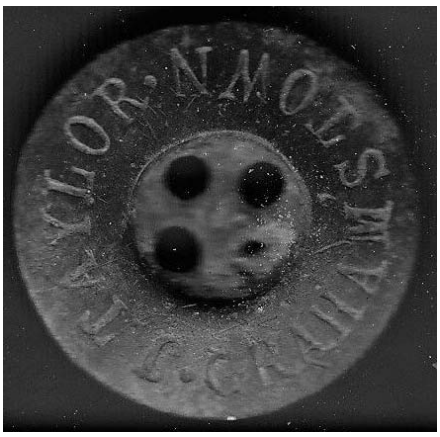


Fig. 2: Button excavated at Elisutho with town name (photo D Palk)

The metal button assemblage found at the mission is representative of the trade that was conducted with the settler towns. Sixteen metal buttons were excavated and collected at three of the four hamlets. A single iron button was found at Endulini, nine were excavated in two middens at Elisutho and six were found at Embakhobokeni. The only midden where no buttons were found was at Middel Plaas. Buttons were exchanged as a means of payment. Shaw (1872) regularly stipulated that buttons, wire and beads must form the major portion of items shipped to the colony by the parent church. The church understood quickly that these items could be exchanged and traded with indigenous groups. Theal (1902:165) remarked:

'I find little difficulty in hiring the men to labour for me with such articles as beads and buttons, which are in fact the circulating medium of the people.'

Buttons are also representative of the adoption of European clothing at the mission. These changes were directly connected to mission rules and regulations: rectangular homes had to be constructed, church services attended and European clothing worn.

Ten of the 16 buttons found at the mission are four-hole sew-through buttons. The other six are metal buttons with shanks. While it is unclear exactly how many of the buttons in this assemblage were acquired as payment, the assemblage does give a clear idea of the types of clothing worn by the residents at each of the hamlets. The single sew-through button found at Endulini was originally sewn onto a

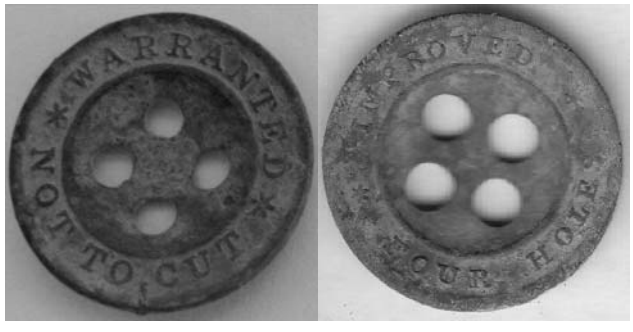


Fig. 3: Four-hole sew-through buttons (photo D Palk)

pair of trousers as an attachment point for suspenders. Sew-through buttons found at Elisutho and Embakhobokeni are buttons for trousers and under garments (Fig. 3 and Table 1).

While it is evident that the tenants entered Grahamstown and Salem to purchase their supplies and to trade, this distinction is not as clear when it comes to where the residents obtained clothing. A single button excavated at Elisutho appears to confirm the hypothesis that at least some of the clothing worn by the inhabitants was purchased in town. The button is engraved with the words 'J Taylor' and 'Grahamstown' (Fig. 2). A search of the town directories has revealed that there was a tailor with that surname living in Grahamstown.

The six buttons with shanks also highlight clothing items (Figure 4 & Table 2). While the sew-through buttons are from trousers or under garments, these buttons were predominantly utilised in jackets and other garments that require a heavy-duty button. A decorative moulded button with a floral pattern is reminiscent of the glass buttons that were produced in similar moulds. This metal button appears to be a resilient alternative to glass, thus enabling a manufacturer to ship decorative buttons to the colony.

No metal buttons were excavated at Middel Plaas, even though the surface collection was undertaken at the church and excavations were done at a rect-

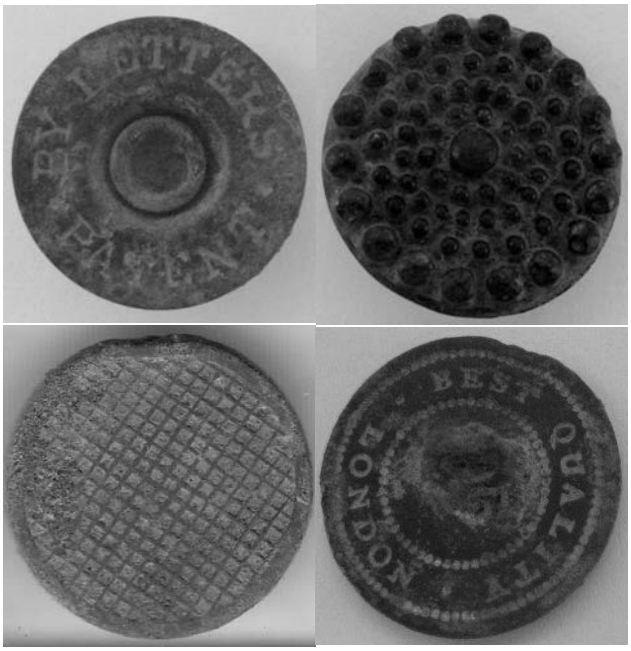


Fig. 4: Buttons with shanks (photo D Palk)

angular house foundation. The absence of this metal typology at Middel Plaas may be indicative of the missionary family being more adept at reattaching buttons and maintaining their wardrobe. The lack of buttons could also indicate that spare buttons at the

Continued on page 22

Table 1: Summary of four-hole sew-through buttons by hamlet

Button location	Button description	Wording or identifying features	Identification
Endulini	4 holes, sew-through, dish type	Suspender	Trouser button
Elisutho-Midden 1	4 holes, sew-through	Utilitarian, no wording	Trouser button/under garments
Elisutho-Midden 1	4 holes, sew-through, dish type	Dotted engraving around the circumference of the button	Trouser button
Elisutho-Midden 2	4 holes, sew-through, dish type	J Taylor-Grahamstown	Trouser button
Elisutho-Midden 2	4 holes, sew-through	NE Plus Ultra	Trouser button
Elisutho-Midden 2	4 holes, sew-through	My Tailor-Cheapside	Unidentified
Elisutho-Midden 2	4 holes, sew-through	Double Ring Edge	Trouser button
Embakhobokeni	4 holes, sew-through	Approved Four Hole	Trouser button
Embakhobokeni	4 holes, sew-through	Warranted Not To Cut	Trouser button
Embakhobokeni	4 holes, sew-through	Utilitarian Button-Thin Line Around Circumference	Trouser button/under garments

Table 2: Summary of buttons with shanks by hamlet

Button location	Button description	Wording or Identifying features	Identification
Elisutho: midden 1	Button, with shank	Patent by letters	Trouser button
Elisutho: midden 2	Moulded button with shank	No engraving (floral pattern)	Decorative (reminiscent of the glass buttons with floral designs)
Elisutho: midden 2	Rounded button with shank	No engraving	Shirt button
Embakhobokeni	Button with shank	Best Quality London	Jacket button
Embakhobokeni	Button with shank	Cross-hatched pattern	Jacket button
Embakhobokeni	Button with shank	No engraving	Jacket button

JOHN WRIGHT AWARDED HONORARY DOCTORATE

John Wright, who serves on the committee of the Northern Branch of the SA Archaeological Society, was awarded the degree of Doctor of Literature (*honoris causa*) by the University of Cape Town (UCT) in June 2016. Nigel Worden, King George V Chair in History at UCT, delivered the citation, which reads, in part:

'There sits on the shelves of our library here at UCT, and on the shelves of libraries throughout the world, a remarkable set of volumes. They do not have a catchy title of the type promoted by publishers' agents, but the six volumes of *The James Stuart Archive of Recorded Oral Evidence Relating to the History of the Zulu and Neighbouring Peoples* are as sensational as they come. At least they are to historians, Zulu linguists, anthropologists and archaeologists, as well as to lawyers and land claimants. And they should be so to all South Africans who are concerned about how our past has been shaped. For they contain conversations held between James Stuart, an official of the Natal colonial administration, with hundreds of Zulu-speaking men and women in the late 19th and early 20th centuries: men and women who lived through some of the most turbulent times in the history of Natal and whose memories extended back to the time of Shaka.

'These conversations are a unique resource for understanding the events and ways of thinking of South Africa's indigenous inhabitants at a time when the onset of the mineral revolution was making its cataclysmic impact on the people of our country. It is well known that such voices rarely appear in the historical records, certainly not before the era of mass media or mass political organisations. History is too often told from the perspective of elites, of those who dominate the production of written sources. The *James Stuart Archive* is a powerful alternative to such perspectives.

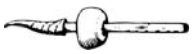
'John Wright is the man who has given us access to these extraordinary conversations. Together with Colin Webb, a former Professor of History and Dean of Arts at UCT, he began in the early 1980s to meticulously transcribe, edit and translate these records. Colin Webb died in 1992, but John Wright continued the mammoth task alone. It is rare to find a scholar of such sensitivity, not only to language but also to the people who used it, of such patience and such tenacity. John is driven by a passion to bring the story of South Africa's pre-colonial and early colonial past to light, and to hunt behind the myths and stereotypes that pervade the representations of pre-colonial Africa, especially in KwaZulu-Natal.

'The *James Stuart Archive* is only one, albeit the major, product of John Wright's passion. He has produced a range of books and articles that have

Profs John Wright (left), Carolyn Hamilton, NRF Chair in Archive and Public Culture, UCT, and Nigel Worden, History Division, UCT (photo UCT)

seismically changed our understanding of the pre-colonial South African past, often stepping into dangerously controversial waters, such as challenging the centrality of the Mfecane and Shaka. He has worked with and across the disciplines of history, linguistics, anthropology, archaeology and gender studies with meticulous scholarship. He is *always* curious about new approaches, subjecting them to rigorous interrogation, taking them on board wherever productive.

'As a teacher for many years at the University of Natal Pietermaritzburg, and more recently at Rhodes, Wits and at UCT, he has transformed the ways of thinking of countless students. And it is a sign of the recognition of the value of his work that school curriculum designers used his chapter in the *Cambridge History of South Africa* (2010) to structure a key section of the new South African senior school history curriculum. John Wright is a man of immense scholarship who has quietly but fundamentally changed our understanding of the South African past.'



Correction: Flywhisks in /Xam Stories and Rock Art

José Manuel de Prada-Samper has sent the following note about his lead article under the above heading in *The Digging Stick* 33(2), August 2016:

Jeremy Hollmann pointed to me recently that there is a mistake in my reading of /han=kass'o's description of the best tail for a *!nabbe*. I mistook the /xam term for tail, *!khwi*, for the very similar word of field mouse. Actually, the best tail for the perfect *!nabbe* is that of the *//wa*, the bat-eared fox. Another, smaller, mistake is in column 2 of page 2, para. 3: 'is the plural of *!nabba*' should of course read 'is the plural of *!nabbe'*.

ELEPHANTS AND RINGING ROCKS IN THE KAROO

Neil Rusch

What you hear *in the Karoo is stillness, but if you listen, what you hear is not silence.*

Fig. 1: Elephants and human figures engraved on rock. First published in San Rock Engravings: Marking the Karoo landscape *(2010) (photos in Figs 1 to 4 by Neil Rusch).*

In 2007 I began gathering material that resulted in two publications: *Karoo Rock Engravings* (2008) and *San Rock Engravings: marking the Karoo landscape* (2010). At that time I became interested in rock gongs, so called 'ringing rocks', technically known as lithophones or ideophones. These percussion instruments occur in the semi-desert Karoo region, previously occupied by hunting and gathering people known as the |xam. In several places I discovered rock gongs that had not been documented previously. As time went on this became a serious interest, and consequently I collected my findings and wrote a paper entitled 'Sounds and sound thinking in |xam-ka !au: "These are those to which I am listening with all my ears."'[1]

In tandem with my research, there was collaboration and a field trip with Adrian Kohler and Basil Jones of the Handspring Puppet Company. They were keen to record sounds from the gongs for some future puppet project, a work-in-progress. The photo in Fig. 2 was taken near the Nelspoort rock gong during the 2007 field trip. Nothing much happened after that because the Handspring Puppet Company began creating and building the puppets for *War Horse*, the internationally successful theatre production.

In the meantime, Prof. John Parkington and I decided that it would be a good idea to recreate a rock gong and reproduce the sounds. Our intention was twofold: to encourage public awareness of rock gongs and to provide an opportunity for Afrikaans-speaking |xam descendants to reconnect with the instrument that had been used by their ancestors in the past.

The first thing to be done was to identify a suitable cluster of dolerite boulders. This could not be an original gong since such artefacts are protected under the South African Heritage Act of 1999. However, by this time I was confident that I knew the character and quality of the rocks that we needed. I had also developed an understanding of how the rocks should be positioned to produce the best possible sounds. The arrangement of the rocks is crucial as they might make a sound when struck, but the sound will be dull and will not ring unless the rocks are placed correctly.

This all happened in 2014; we found the rocks we wanted and a few months later we went back with the

Fig. 2: Basil Jones in the vicinity of the Nelspoort rock gong

Neil Rusch designs and publishes books, most recently *First People: Ancestors of the San* (2015), *Sonqua: Southern San History and Art After Contact* (2015), *Karoo Cosmos: |xam-ka !au and the |xam* (in print) and *Grave Encounters: Archaeology of the burial grounds, Green Point, South Africa* (about to print). He is working on *Bushman Stories*, a collection gathered by Gideon Retief von Wielligh in the 19th century. rusch@netactive.co.za

Fig. 3: Loading the selected dolerite rocks to create the rock gong replica

necessary equipment to move them. Fig. 3 shows the rocks being lifted at a site half way between Brandvlei and Kenhardt in the Northern Cape. The rock gong replica is now situated at the premises of the Living Landscape Project in Clanwilliam, about 300 km south of where the rocks were sourced.

Simon Kohler, the nephew of Adrian Kohler, heard about our project and as a composer and musician showed great interest. In the interim Adrian and Basil had won a Tony Award for their contribution to the *War Horse* production and its success. Although time had moved on, a synergy had developed from our interaction over the previous nine years. As a result, Simon and I made a professional recording of the Clanwilliam rock gong sounds late in 2016. Fig. 4 shows Simon setting up to make the recording (the temperature that day was 41 °C).

The Handspring Puppet Company had contracted Simon to compose and choreograph the sound for Adrian and Basil's latest project, *Olifantland*.[2] Included in the brief was that rock-gong sounds were to be incorporated in the production. The intriguing consonance between gongs and the many elephant images engraved on rocks in the Karoo suggested that elephant sounds, both heard and unheard (infrasound), should be investigated as well. As a result, elephant rumbles, squeals and trumpeting are now instrumentally reproduced from inside the elephants by the puppeteers.

All this was successfully accomplished and the rock gong sound joined the elephants in *Olifantland*, which 'premiered' on 18 December last year in the Karoo village of Barrydale. Fig. 5 shows two of the elephant puppets on the night of the performance. An iphone video by Amy Rusch of the elephant puppets during rehearsal, including the sound of the rock gong composition by Simon Kohler – FIELD, is available at https://youtu.be/ha7ne6vbb6Y.

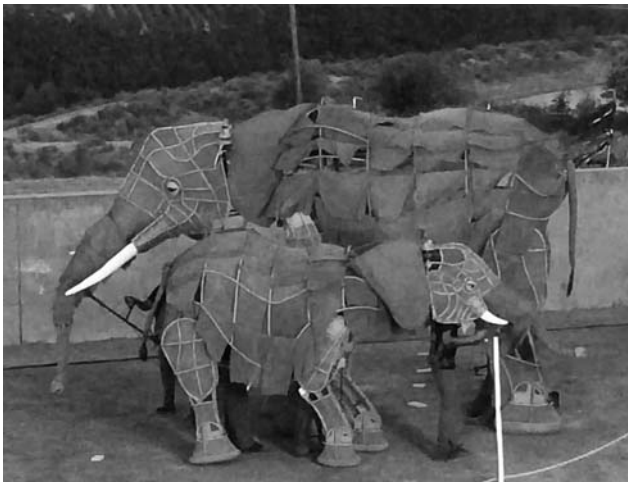


Fig. 5: Two elephant puppets in the Olifantland performance (photo by Amy Rusch)

Fig. 4: Simon Kohler sets up to record the ringing rock sounds

When *Olifantland* played in Barrydale it was a special occasion. Seldom do research and artistic creation come together in this way. Following a long silence during which time elephants had been killed and the culture of the |xam had been decimated, the Karoo landscape was once again animated by gong and elephant sounds.

What is most gratifying is that our networking and efforts over many years is now engaging small-town Karoo communities in ways that are not only sensitive to indigenous identity, but are ecologically relevant.

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THE PREPARATION FOR BURIAL OF THE BODIES OF RICH AND NOBLE EGYPTIANS IN ANCIENT TIMES

Barry Dane Jacoby

Introduction

In ancient Egypt, the bodies of the wealthy and nobles were prepared for burial by skilled craftsmen and priests who embalmed them and made canopic jars to hold their entrails, burial masks to cover their faces and amulets to protect them from harm. The Egyptians' belief in life after death was not a belief in the life of the spirit alone, but belief that human existence did not end with death and that the whole body would live in the afterworld. It was therefore of the utmost importance that the body, as the home of the spirit that would be reunited with it in the realm of the dead, be preserved (Taylor 2001:46). Since the body was held to be sacred, the Egyptians had a horror of its destruction as this could prevent the person from having life in the afterworld. Death by burning was the penalty for the most serious crimes as nothing would remain of the body to serve as a home for the spirit.

In early times, bodies were placed in a pit in a sleeping foetal position. Personal items such as clay pots and jewellery would accompany them. The sand that covered the corpse absorbed its moisture and preserved it (Mysteries of Egypt, Mummification).

In the process, the body was cleaned, the internal organs were removed, preserved and stored separately, the body was dried and preserved, and then wrapped in linen with amulets to protect the spirit of the deceased. There was a ritual aspect to this preservation: the proper prayers and incantations had to be said at appropriate times.

Embalming the body

Mummifying bodies began about 2400 BC. Originally, only the bodies of pharaohs were mummified as it was believed that only they would become immortal, but from 2000 BC it was believed that as long as the proper procedures were followed, anyone could live in the afterworld (Mysteries of Egypt).

The word 'embalm' derives from the Latin words 'in balsamum', meaning preservation with balm, and 'mummy' comes from the Persian word for bitumen, 'mummia' (Quirke & Spencer 1992:89). Originally, mummification consisted of little more than wrapping the corps in cloth stiffened with resin. However, after about 2575 BC the viscera were removed and preserved (Fagan 2007:391). The embalming and mummifying ritual took 70 days (El Mahdy 1989:56)

After death, the body would be taken to the *ibu* (the tent of purification), where it would first be washed in a solution of natron, which is a compound of sodium carbonate and sodium bicarbonate (Mysteries of Egypt). Different washing places were used for the royal family and commoners (Taylor 2001:52). The washing process had a ritual element as well as a practical one as the Egyptians believed that water symbolised life-giving qualities (El Mahdy 1989:56). The cleaning ritual may have represented the first steps in rebirth of the person to be mummified (King Tut One.com). Normally a corpse would be handed over to the embalmers very soon after death, as otherwise it would begin to decompose in the heat.

The next step was the removal of the brain and other organs from the body. This was done at the *wabet* or place of embalming (El Mahdy 1989:57). The Egyptians did not understand the function of the brain and it was thus thought to be useless and not worthy of preservation. It would be removed with an iron hook that was inserted through the roof of the nasal cavity or sometimes though an eye socket. This process could cause damage to the skull. The skull would then be packed with sawdust or scraps of linen cloth (Fig. 1).

*Fig. 1: Mummification tools – brain hooks, oil jar, funnel, embalmer's knife (*Mysteries of Egypt, Mummification*, Internet article 1)*

The removal of the viscera was an important step. The liver, lungs, stomach and intestines, and sometimes the kidneys, were preserved separately by being placed in individual canopic jars. To remove the viscera, the bodies were laid on a sloping stone table that permitted the fluids to drain, and the left side of the abdomen was cut open with an obsidian or flint knife (Taylor 2001:54). The line of the cut was marked

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by a priest called a 'scribe', while another priest, known as the 'ripper up' or 'slicer', would make the cut (El Mahdy 1989:57). The heart was not removed because it was believed to be the source of memory and intellect of the deceased, and would thus play an important role when he was judged by Osiris in the afterlife.

After this the body was again cleaned with water. A plaque of metal or wax, called an embalming plate, would often be placed over the wound. This would usually have an image of the eye of the god Horus, or some other symbol of protection, on it (Quirke & Spencer 1992:90). After this, the lengthy process of dehydrating the body would begin. Early on it was simply done by air drying, but in most cases natron would be used. This crystalline salt draws moisture from the body and breaks down fatty tissue (Taylor 2001:56). Small linen packages of natron were placed inside the body and it was covered with more natron. This process could take up to 40 days (El Mahdy 1989:59).

The exterior of the body would then be treated with perfumes and resinous oils. These would coat the body and protect it from moisture. Several applications of oils and oily pastes were applied, and liquefied resin would also be poured into the body itself (Taylor 2001:57).

Preservation of the internal organs

Each organ was treated separately, dried, covered with oil and resin, wrapped in linen (El Mahdy 1989:60) and preserved to ensure that it would continue to serve the deceased in the afterworld. The embalmed organs would be placed in the burial chamber near to the rest of the body. In the time of the Old Kingdom they were placed in chests that were made of stone or wood and that resembled small shrines. However, by the time of the 4th Dynasty the organs were placed in special jars known as canopic jars (Quirke & Spencer 1992:90). These, in turn, might be placed in canopic chests, often made of alabaster (Figs 2 and 3).

Fig. 2: Wooden canopic chest from the 18th Dynasty (Taylor 2001)

Each organ was entrusted to the protection of one of the four sons of Horus. Imetsy, who had the head of a man, guarded the liver, Hapy (also known as Hepwy), who had the head of a baboon, the lungs, Qebehsenuef, with the head of a falcon, the intestines, and Duamutef, who was jackal-headed, the stomach (Wikipedia: Canopic Jars).

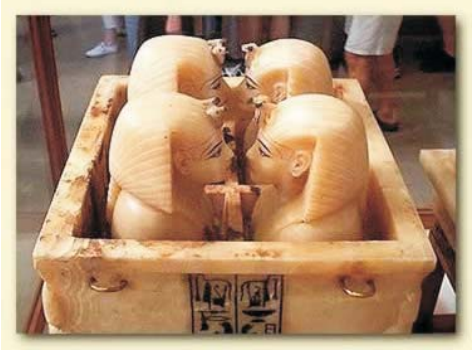

Fig. 3: Gilt wooden shrine of Tutankhamen containing canopic jars (Internet article 4)

The earliest jars, dating from about 2500 BC, were of simple design (Taylor 2001:67), but as time passed they became much more elaborate, changing from pottery to stone. Prior to the 19th Dynasty the stoppers were shaped like a human head, but thereafter the stoppers were usually carved in the form of one of the guardian sons of Horus (Quirke & Spencer 1992:92). The jar would also bear inscriptions asking the god for protection (Taylor 2001:68). By the time of the 19th Dynasty, when canopic jars were still used for pharaohs, for non-royal burials the embalmed organs were placed in small canopic coffins (Fig. 4). These were miniature coffins specially designed to hold the viscera.

A further change took place towards the end of the New Kingdom when the wrapped viscera, together with a small statue of one of the sons of Horus, would be put back inside the body before it was wrapped. (Taylor 2001:72) (Fig. 5). Because the canopic jar had been an integral part of the burial practice and because of its religious significance, its use was not discontinued, even though the viscera were now put back into the body. Symbolic canopic jars were still placed in the burial chambers. Some of these jars did not even open. During the late 25th Dynasty the practice of placing the organs in canopic jars was revived (Taylor 2001:75). Canopic jars made of calcite or Egyptian alabaster are among some of the finest examples of Egyptian artwork (Canopic chests and jars).

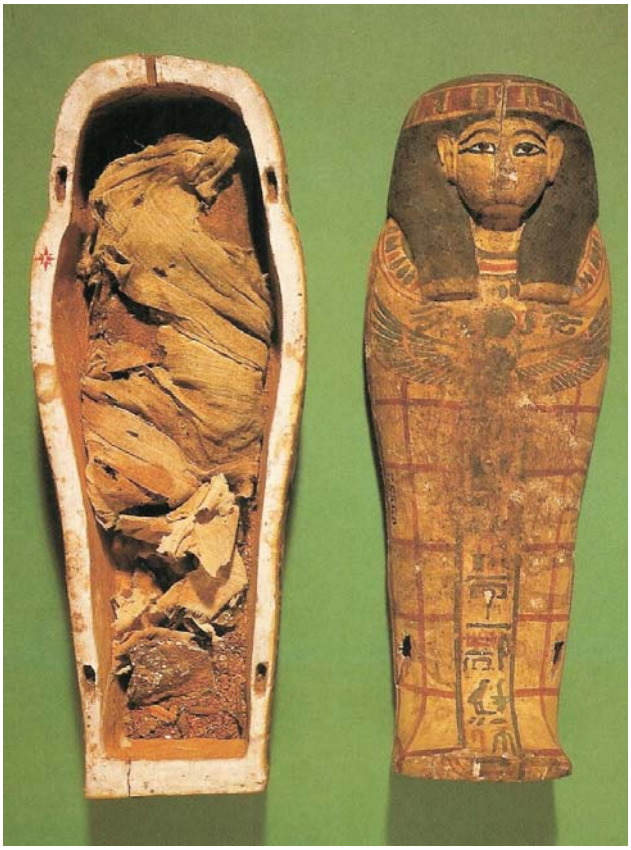

Fig. 4: 20th Dynasty canopic coffin (Taylor 2001)

Restoring and wrapping the body

After being embalmed, the body would be taken to yet another place, the *per nefer* or 'house of beauty', where it was rubbed with perfumes and oils, including juniper oil, spice, wine, milk and beeswax to make it supple (El Mahdy 1989:65). Before wrapping commenced, the body was restored, as far as possible, to a lifelike appearance. Hair would be arranged and artificial eyes placed in the sockets. Small onions were also used to replace the eyes (Mysteries of Egypt). Because dehydration removed most of the fat and muscle tissue from the corpse, resulting in a body that consisted primarily of a skeleton covered by skin, it was necessary to restore, as far as possible, the body shape. The body cavity would be packed with various materials to fill it out and to provide a pleasant smell (Taylor 2001:57). The materials would include mud, sawdust, linen, lichen and aromatic resins. In later times, packing materials would be inserted under the skin.

Artificial body parts such as toes and fingers would also be attached to the corpse if needed, and gold or silver stalls would be placed over the tips of fingers and toes. Pads of linen would be used to fill sunken areas or plaster models used for reshaping external contours such as a woman's breasts (Mertz 1964:102). The bodies of men would be painted with red ochre and those of women with yellow ochre (El Mahdy 1989:65) before being wrapped (Fig. 6).

Royal mummies were of course wrapped in only the finest quality new linen, but for others the wrappings would sometimes consist of second-hand waste cloth such as bedding or clothing. Hundreds of metres of linen would be used (Encyclopaedia Smithsonian). The process of wrapping took at least 15 days. A specific ritual had to be followed with prayers said at appropriate times during the process (El Mahdy 1989:68).

The body was laid out on a lion-shaped funerary bed (Fagan 2007:391) and wrapping started with the fingers and toes being wrapped individually, followed by the limbs (Encyclopaedia Smithsonian). Some authors such as Fagan state that the head was the last body part to be wrapped, while others such as El Mahdy (1989:69) state that it was the first to be wrapped. Because the loss of one's head meant that the deceased would not be able to breathe, see, hear, speak, eat or drink, great emphasis was placed on preserving the head.

Charms, amulets and inscribed pieces of papyrus with prayers to protect the deceased from evil were inserted in the wrappings during the wrapping process (Mummification Process; Fagan 2007:391). Resin was applied several times during the bandaging stage to strengthen the mummy and make the wrapping waterproof. After all the limbs had been bandaged, the body was wrapped in a shroud of linen held in place with strips of coloured cloth arranged in different directions (Taylor 2001:60). The position of the arms varied from dynasty to dynasty: sometimes they were crossed over the chest or, in the case of males, placed over the genitals or, in the case of females, arranged at the body's sides (El Mahdy 1989:68).

Fig. 5: Corpse from 21st Dynasty with wrapped organs replaced (Taylor 2001)

The funerary mask

The final step in the preparation of the body was the mask. During the time of the Old Kingdom the body was prepared as a representation of the deceased and facial features were painted on the wrappings (Taylor 2001:60), but in later times, starting with the First Intermediate Period, a symbolic mask and not a representation of the deceased was put in place. It represented the deceased in the state aspired to after death, as a transfigured person with divine qualities (Fig. 7). However, in the case of the royal family the mask was a likeness of the deceased.

Some funerary masks would be fashioned out of

cartonnage, namely papyrus or linen coated with a type of plaster, although for the nobility wood and for a pharaoh gold and silver were used. El Mahdy (1989: 69) dates these masks to the Middle Kingdom, but Taylor (2001:60) dates them to the Old Kingdom. One of the purposes of the mask was to identify the body to the spirit of the deceased when it was reunited with it in the burial chamber (Quirke & Spencer 1992: 90). A death mask contained magical powers (Taylor 2001:61). It also symbolised elevation to a divine status, hence the practice of colouring the skin gold and adding a blue wig, both being considered god-like attributes.

Fig. 6: A wrapped mummy (Egyptian picture gallery[7])

Funerary amulets

The ancient Egyptians had a great belief in the power of amulets to protect the spirit of the deceased from harm. The shape, colour and material of which they were made, as well as the particular rituals and spells associated with them, would determine their efficacy, as would their positioning on the body (Taylor 2001: 200). Special protection for all eternity was to be provided by these amulets (El Mahdy 1989:139). The number of amulets increased from the time of the First Intermediate Period (Taylor 2001:202).

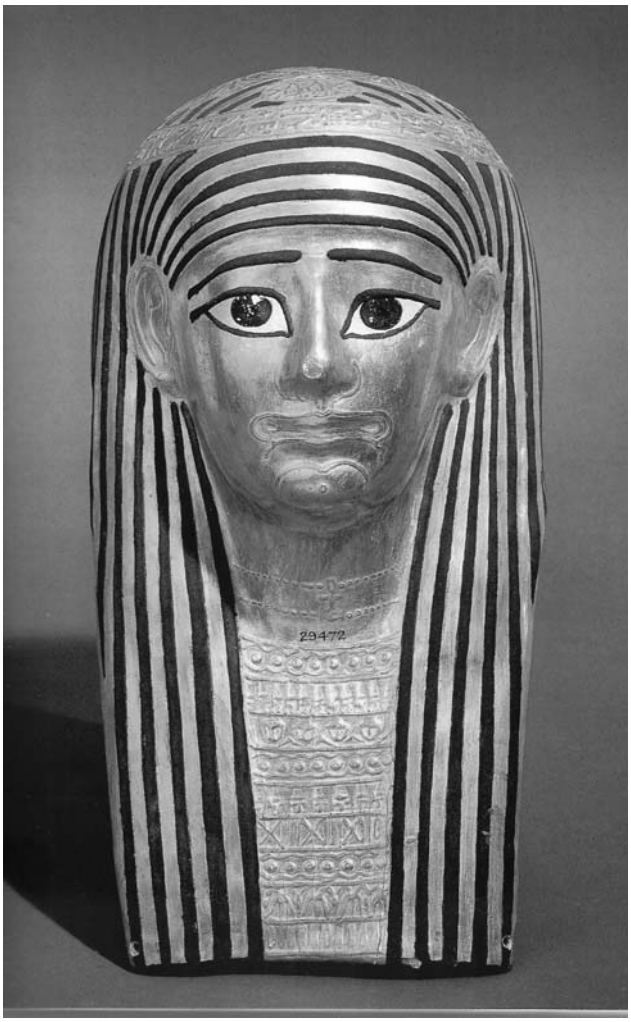

Fig. 7: Example of a funerary mask used during 1st century BC to 1st century AD (Taylor 2001)

The most important amulet was the heart scarab, which protected the heart and prevented it from betraying its owner when it was weighed in the scale of judgement by Anubis (El Mahdy 1989:153). The scarab was associated with rebirth. Special spells would be inscribed on the scarab (Taylor 2001:206). Other important amulets were the eye of Horus, which warded off evil, and the *Djed* pillar, which offered stability and the possibility of resurrection (Quirke & Spencer 1992:94). Many other amulets in the form of gods and goddesses were used to place the deceased under their protection.

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Metal button assemblage

Continued from page 15

church and the missionary's home were given to the congregants, perhaps even as a method of payment. The missionary and his family may also have placed less importance on this artefact.

Conclusion

The unique location of the mission station at Farmerfield, and the fact that mission residents were actively involved in the economies of Grahamstown and Salem, enable the analysis of even the smallest artefacts and contribute to the study of trade in the Eastern Cape in the early 19th century. The buttons recovered reflect how material culture was integrated into the everyday lives of mission residents. The fact that this material culture involved the introduction of European dress on the mission can be perceived negatively. However, the buttons were a valuable form of payment to indigenous groups, and were in this manner incorporated into traditional lifeways and dress.

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WORLD ARCHAEOLOGY

Neanderthals dosed themselves with painkillers

A sick Neanderthal chewed the bark of the poplar tree, which contains a chemical related to aspirin. He may also have been using penicillin long before antibiotics were developed. The evidence comes from ancient DNA found in the dental tartar of Neanderthals living about 40 000 years ago in central Europe. Microbes and food stuck to the teeth of the ancient hominins gave scientists a window into the past.

Prof. Alan Cooper, director of Adelaide University's Australian Centre for Ancient DNA, said that the Neanderthal's abscess left a trace on his jawbone. The intestinal parasite was identified through studying DNA in dental tartar. It appears the Neanderthals had a good knowledge of medicinal plants and how these might relieve the pain of tooth-ache or stomach ache. They might also have used antibiotics. However, the use of antibiotics would be very surprising.

The research also gives new details of the diet of Neanderthals at a cave site in Belgium. They were prolific meat eaters, dining on rhinoceros and wild sheep supplemented by mushrooms. Others, living further south in Spain, were largely vegans, consuming moss, bark and pine nuts.

The researchers also examined bacteria that lived in the mouths of Neanderthals to see how microbial flora has changed over time. In the process, they reconstructed the oldest microbial genome yet sequenced – a bacteria associated with gum disease that is 48 000 years old. They discovered the collection of bacteria in the mouths of ancient populations seems to be linked to the amount of meat in the diet. *BBC News, 08/03/2017*

'Unparalleled' number of dinosaur tracks found

Twenty-one different types of dinosaur tracks have been unearthed in rocks up to 140 million years old in the Kimberley region of Western Australia. Palaeontologists from the University of Queensland and James Cook University said it was the most diverse such discovery in the world. Steve Salisbury, lead author of a paper on the findings published in the *Memoir of the Society of Vertebrate Palaeontology,* said, 'It forms the primary record of non-avian dinosaurs in the western half of the continent and provides the only glimpse of Australia's dinosaur fauna during the first half of the Early Cretaceous Period. Among the tracks is the only confirmed evidence for stegosaurs in Australia.'

The area was almost lost, with the Western Australian government in 2008 selecting it as the preferred site for a massive liquid natural gas processing precinct. Alarmed, the region's traditional Aboriginal custodians, the Goolarabooloo people, contacted Salisbury and his team to officially research what they knew was there. Goolarabooloo official Phillip Roe explained that the dinosaur tracks formed part of a

songline that extends along the coast and then inland, tracing the journey of a Dreamtime creator called Marala, the Emu Man and Lawgiver. Aboriginal Australians have developed and are bound by highly complex belief systems, known as the Dreamtime, that interconnect the land, spirituality, law, social life and care of the environment. A songline is one of the paths across the land which mark the route followed by localised 'creator-beings', stories that have been handed down through the generations.

The area was eventually awarded National Heritage status in 2011 and the gas project subsequently collapsed. 'There are thousands of tracks around Walmadany. Of these, 150 can confidently be assigned to 21 specific track types, representing four main groups of dinosaurs,' Salisbury said. 'There were five different types of predatory dinosaur tracks, at least six types of tracks from long-necked herbivorous sauropods, four types of tracks from two-legged herbivorous ornithopods and six types of tracks from armoured dinosaurs.' *AFP, 07/03/2017*

Fossils point to life on earth 4 billion years ago

The oldest fossils ever found are claimed to be 'direct evidence' of life on earth 3,8 to 4,3 billion years ago. Even at the lower end of the spectrum, 'the microfossils discovered are about 300 million years older than any runners-up', said Dominic Papineau of the University College London. The dating puts the fossils 'within a few hundred million years of the accretion of the solar system.' Earth is thought to be about 4,57 billion years old.

The tiny fossils – half the width of a human hair and up to 0,5 mm in length – take the form of blood-red tubes and filaments formed by ocean-dwelling bacteria that fed on iron. Locked inside white, flower-like quartz structures known to harbour fossils, they were found along what were once warm-water vents on the ocean floor. Known as the Nuvvuagittuq Supracrustal Belt, the site of the discovery contains some of the earth's oldest sedimentary rocks.

Previous claims of super-ancient fossils have been challenged by scientists asking whether they are, in fact, natural mineral formations of some kind. 'One of the big questions when it comes to early life studies is whether the organic carbon we find in these rocks is actually biological in origin,' explained Dodd. The researchers used several methods to check, including laser-imaging to analyse the minerals associated with the organic material. The presence of two in particular – apatite and carbonite – provide strong evidence for life, they said. Moreover, the flower-like quartz structures in which the tubes and filaments are embedded have often been found in younger rock to contain traces of bacteria that consumed iron for energy. *Nature/Daily Maverick, 01/03/2017*

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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 Digging Stick

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