ARTEFACTS

Reports covering the period February to December 2016

EVENING LECTURES

Homo naledi: the facts

(4 February 2016)

Dr Bernhard Zipfel, palaeoanthropologist, Curator of Fossil and Rock Collections, Evolutionary Studies Institute, University of the Witwatersrand

r Bernhard Zipfel gave a fascinating account of the discovery of *Homo naledi*. He set it within the 140-year history of hominid fossil finds in Europe, East Africa, southern Africa and Indonesia from 1875 to 2015, and showed how these finds interlinked with finds of *Australopithicus, Paranthropus* and *Ardipithicus*.

The caves where *Homo naledi* was found were discovered by Steven Tucker and Rick Hunter in the Cradle of Humankind in 2013. The fossil site is 90 m from the cave entrance and 30 m underground, and can only be accessed through a very narrow passage. Tucker and Hunter found the floor covered in fossils. The University of the Witwatersrand and the National Geographic Society funded two excavations, carried out by six very slender and specially chosen women archaeologists. They discovered 1 100 fossil specimens on the muddy clay surface of the 4 m by 4 m chamber. The excavations were watched by direct video link by lead researcher Lee Berger of Wits University and other researchers in the 'command centre' situated in a tent on site.

On being brought to surface, the very fragile and soggy fossils were put in the sun to dry. One of the first specimens found was a mandible. This and the other fossils were documented by 40 emerging scientists who specialised on the morphology of the hand, the foot, the pelvis and the cranium. All the specimens recovered belong to one species and represent 15 individuals. No complete skeleton was found.

After reconstruction, it was calculated that adult males stood around 150 cm tall and weighed around 45 kg. Females were a little shorter and weighed a little less, similar to small-bodied modern humans. Teeth and molars were similar to ours, but the brow ridge was heavy. The brain volume of 560 cc was about a third of that of modern humans. *Homo naledi* stood upright and was bipedal. It had long legs and feet that were human-like and not suitable for climbing. The ankles were similar to those of the genus *Homo*, but the foot arch was not. The hands had wrist bones similar to ours, but the fingers were still curved to use for climbing. Zipfel thinks it possible that

modern human evolution began with the development of the feet, and that brain development occurred later.

A model of the face had been reconstructed by paleo-artist John Gurche. There is great controversy about why so many fossils were found together in a cave with extremely difficult access. Bernard said that it was possible that the bodies were purposefully disposed of in the distant cave, but there was no evidence of ritual burial. It was also not likely that the individuals got there as a result of a catastrophic event as there was no geological evidence to support that theory. The species has not yet been dated, but DNA testing might be possible. There were probably many more bones to be found at the site and at other sites in the area.

Report by Hilary Geber

Forts and castles, coasts and hinterlands: the evolving history of a Ghanaian World Heritage Site (3 March 2016)

Dr Natalie Swanepoel, senior lecturer in the Department of Anthropology and Archaeology, UNISA

r Swanepoel told us that along the coast of Ghana there are about 80 forts and castles that were built by European trading nations between 1482 and 1786. Declared collectively as a UNESCO World Heritage Site, their status rests on their 500-year history in the trade relationship between Europe and Africa. Although they played a very significant role in the trans-Atlantic slave trade, the forts are important in the wider history of trade, slavery, colonialism and post-colonialism in Ghana and West Africa.

The interest in Ghana began with the quest for gold. The fabled riches of Africa were well known but difficult to access. Originally, trade took place by means of trade routes across the Sahara Desert, with the Ghana coast at the periphery of this trade. In the process of working their way down Africa, the Portuguese established a land base on the coast of what is now Ghana known as Elmina, meaning 'The Mine', and trade with local societies was established. Hitherto, the coastal settlements had been small fishing villages but they grew rapidly as the inhabitants became the middlemen in the trade network that developed. Within a few years, they were supplying bullion to the world market.

The Ghanaian coast was particularly suited to such a development as alluvial gold deposits were found only 15 km inland. The rocky coastline had many natural bays and there was no rough surf. The Elmina fort was able to be built from local rock and building materials brought in by sea from Europe. The purpose of the forts was not only to protect traders from local attack, but also to defend the trade against other European nations. For this reason, there were cannon pointing out to sea. Elmina was modelled on a medieval castle, with the design dictated by the lay of the coast. Other trading posts followed, with Dutch, Danes, Swedes, Brandenburgers, French and British traders establishing trading bases. Skirmishes took place between them and forts changed hands



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Trade routes connecting West Africa with North Africa and the Mediterranean (map by Chriselle Bruwer)

over the years of occupation. The forts were like permanent ships on land. There was no settler community and life expectancy of Europeans serving on the coast was just five to six years. The ravages of yellow fever, malaria and cholera resulted in a very high death rate.

This stretch of the Ghanaian coast became a frontier, bringing very different societies from Europe and the West African interior into contact with each other. The Europeans were there for the gold and in exchange the Africans wanted textiles, iron bars, beads, knives and swords. Europeans even brought slaves from other parts of Africa, as more manpower was needed to extract the gold. The history of the trade can be divided into three phases.

Phase 1: 1450 - 1650

The Gold Coast exported natural resources such as gold, ivory, pepper and skins. Miners and porters were needed, so slaves were imported from neighbouring regions such as modern Benin, being paid for by goods. At this stage slave trading in the vicinity of the Gold Coast forts did not occur. Gradually, however, as Mexican and South American gold became available, the interest in gold from Ghana waned and the greater slave trade developed.

Phase 2: 1650 – 1850

During this period, 90 per cent of the trade with the Ghanaian region was in human captives. The forts and castles became pivotal in the slave trade. Captives were kept in dungeons until there



The Atlantic shipping routes connecting Britain and Europe, West Africa and the Americas (map by Chriselle Bruwer)

were enough to form a cargo on the dreadful 'middle passage' to the West Indies and Brazil. This period coincided with the development of sugar cane plantations and the need for labour. Manufactured goods were shipped from Europe to Africa, slaves from Africa to Brazil and the West Indies, and the ships returned with sugar to Europe.

Phase 3: Post-1830s

The slave trade was abolished and there was a transition to legitimate trade. Domestic slavery continued in Africa for the production of commodities such as palm oil.

The question arises as to what archaeology tells us about this history? Since the 1990s, teams from Syracuse University have been working in Ghana. Underwater archaeologists explored a 19th-century wreck near Elmina, finding cannon and many brass basins packed with smaller trade goods such as cowries, copper manilas, beads, pins and cloth. Evidence suggests that at one time up to 40 different types of cloth were imported into Ghana.

In 1873 the British were in possession of Elmina and they decided to clear a settlement of dwellings clustered round the castle to make a parade ground. Excavation of this site has revealed evidence of global influence, as new foods from South America were introduced and manufactured goods entered the system. Burials still took place under the floors, although buildings evolved from pole and dagga huts to multi-roomed stone structures. Elminans grew important in their role as middlemen. Old institutions developed in new ways, for example the Asafo shrines which incorporate European iconography.

Nowadays a lot of informal, uncontrolled gold mining is going on, which destroys the land and renders it useless for agriculture. Maintenance of the forts is a huge financial and logistic expense, the main restoration having been done in the 1970s. The fort at Elmina is open to the public and Cape Coast Castle is now a museum, while Christianborg Castle houses government offices. African-Americans come on pilgrimages and do not want to see the forts looking smartened up: they want to experience the pain felt by the slaves in the dungeons and visit the 'Door of No Return'. They do not like to see the forts used for festivals and celebrations. More education is necessary to increase awareness of the forts as trading posts and to value their pioneering role in the bigger picture of trade that became integral to world development.

Report by Pamela Küstner

L'Animal voyant

(7 April 2016)

Renaud Ego is a French scholar and poet who has written 13 books on contemporary art

Renaud Ego's passion for rock art began almost two decades ago when he first saw southern African rock art. The title of his talk, *l'Animal voyant*, has a double entendre, with 'voyant' meaning both the seeing animal and the clairvoyant animal. It is from the perspective of seeing and the visuality of the rock art itself that Ego finds a new way to understand the diverse themes in the rock art of southern Africa. Ego argued that texts (the Bleek and Lloyd archive, Orpen's writings on Qing) and anthropological studies (the ethnographies of Richard Lee and Lorna Marshall) are at the forefront of interpretation in southern African rock art studies. Similarly, myths, which come out of the texts, and rites, which come out of anthropological studies, are given priority over the illustrations. The rock art, therefore, becomes a passive

illustration of the secondary (the texts and the anthropological studies). Mimesis or meaning occurs outside the paintings and the rock art itself is no longer seen as an autonomous phenomenon. To address this, Ego illustrated a number of points about the art, all of which highlighted how different the paintings are from our Western understanding of art and the portrayal of life.

Looking at southern African rock art as a whole, animals make up the central lexicon of the paintings. Animals and humans are often depicted in the same panels. One can separate the more banal motifs of people walking from the extraordinary motifs of therianthropes and rain-animals. However, this separation of the sacred from the profane is imposed from our Western perspective and has no place in San communities. All their activities take place with the same sphere of spirituality. Unlike the world of Western art, the world of San paintings is always moving. The surface is a place of active interactions, of networks and liaisons. This world is completely alien to



The cover of Renaud Ego's book, L'Animal voyant

that of our culture of visual art. The motifs are not in space in a given moment, nor in linear time. There are no fixed points of views but multiple points that move with the eye. These diverse perspectives form what Ego calls a plasmatic palimpsest.

Why are these images painted in this way? To answer this question Ego referred to the connections between what he calls the three modes of figuration. Beyond myth and ritual, there exist three universal processes of figuration – retelling, dancing and painting. These are the starting points where symbolic thought is given forms – narratives, choreographies and pictures – that structure myth and ritual. To recount, to dance and to paint are distinct activities but resonate and reverberate in all San beliefs. We cannot separate the role of myths from that of rituals or vice versa. Nor should one isolate painting from myths or rituals.

The most refreshing aspect of Ego's talk was that there was an absence of resolution of what pictures mean. He successfully steered clear of assigning one unique function to these pictures, and reminded us that interpretation is open-ended and can be constantly reassessed.

Report by Law Pinto

Archaeological encounters with recent Karoo history (19 May 2016) Professor Simon Hall, Department of Archaeology, University of Cape Town

hat was the history of the Northern Cape region in the 19th century as colonial frontiers closed in? What can archaeology tell us about this issue that we don't already know from historians? Prof. Hall framed his lecture round these two questions. The common account is that in the second half of the 19th century the groups of 'Khoisan' hunter-gatherers who lived in the region were broken up and dispossessed of their land as white sheep farmers, backed by the Cape colonial government, moved in. Numbers of individuals, accused of banditry, were hunted down and shot by farm commandos. The survivors became absorbed into the colonial underclass as farm labourers and their culture disappeared.

Recent research done by folklorist José de Prada-Samper points to a different cultural story. In recording tales told among present-day descendants of Khoisan people in the Northern Cape, he has found that there are strong continuities between the stories recorded by Wilhelm Bleek and Lucy Lloyd in Cape Town in the 1870s and 1880s from /Xam interlocutors who had their homes in the Northern Cape, and stories told in the region today (some of these latter have been published by de Prada-Samper in the original Afrikaans with English translations in *The Man Who Cursed the Wind* (African Sun Press and Centre for African studies, University of Cape Town, 2016).) Prof. Hall's own archaeological research also points to a more complex cultural picture.

His research focuses on the material cultures not only of Khoisan hunter-gatherers but also of Afrikaner trekboer pastoralists, who have been largely neglected in the historical literature. Hunter-gatherers were doing 'new' things with 'old' ideas, such as knapping a piece of Chinese pottery as a scraper. In the late 19th century ex-hunter-gatherers on the farms were making engravings in 'old' ways of 'new' subjects, such as wagons and trains. What were the layers of meaning involved in this work? For their part, trekboers often made 'new' *matjeshuise* (mat houses) according to the 'old' pattern used by Khoesan pastoralists. From about the 1840s trekboers, and possibly other people such as established farmers, farm labourers and tenants, also seem to have been building corbelled houses according to an 'old' pattern (the dome) with 'new' materials (stone). Simon Hall sees this as a form of creole or hybrid vernacular architecture.

From the mid-19th century life was changing not only for hunter-gatherer groups but also for the trekboers. They too were becoming marginalised as commercial farming with newly introduced merino sheep slowly became established and land became a capital asset. Mobility across the landscape gradually gave way to permanent settlement on defined farms. The introduction of fencing in the early 20th century marked, both materially and symbolically, the shift from extensive to intensive patterns of land use.

Prof. Hall's well-illustrated talk was an illuminating example of how archaeological research and documentary evidence can be combined to give a fresh perspective on the history of a specific region. His research work in the Northern Cape continues. **Report by John Wright**

'The bees are our sheep': the transition to livestock-keeping during the last 2 000 years in southernmost Africa (2 June 2016) Fave Lander, doctoral student in archaeology, University of the Witwatersrand

Relation of Namibia mark wild hives as private property that falls within ancestrally owned lands. She showed slides of several forager groups like the Okiek, Masula and Suiei in East Africa who have a strong involvement with honey procurement, preserving and trading honey for livestock with neighbouring pastoralist/agropastoralist communities. The Akie gather honey but do not construct hives for bees, although they do reseal the holes from which honey is gathered so that the bees will continue to produce honey on their land and in their trees.

The archaeology of beekeeping has been largely invisible in southern Africa, although interactions between foragers and bees are painted in the uKhahlamba-Drakensberg mountains in KwaZulu-Natal. Honey may have been exchanged for livestock in the Later Stone Age landscape in South Africa, raising the possibility of it being one of the 'invisible exports' in exchanges between farmers and hunter-gatherers in the Thukela Basin of KwaZulu-Natal.

Faye showed slides of fat-tailed sheep paintings from the northern uKhahlamba-Drakensberg and said that they were probably based on the first encounters between foraging people and domestic stock at around 2000 to 1600 BP. They showed the profound impact that these encounters would have had on hunters accustomed only to wild animals. Foragers valued animal fat for spiritual, ritual and social usage. The potency of sheep fat, particularly the ram's high fat content, would have made it a valuable creature, and it was easy to control. Paintings of single, un-herded sheep in association with 'typical' San rock art could perhaps be used to identify older paintings of sheep representing the first encounters between foragers and domestic sheep. The paintings may be an expression of the need to understand the new animal and to deal with its potency, and could reflect the impact that a new group of pastoralists had on foragers' lives at that time.

Parallels between sheep, bees, their products and their keeping were discussed. The colour of raw fat and raw honey, and heated fat and honey illustrated how similar they were in colour and texture. This may have persuaded some foragers to make the transition to herding later than others and only relinquish their forager lifestyle gradually. Amongst foragers such as these the transition

to livestock-keeping would not have been as difficult as was sometimes postulated. Report by Hilary Geber

Lightning strikes and other stories: geomorphic processes in the high Drakensberg (21 July 2016)

Professor Stefan Grab, Lecturer, Division of Physical Geography, University of the Witwatersrand

The story begins in about 2000, when, on the summit plateau of the Drakensberg to the north of Sani Pass, Stefan Grab found a pit full of shattered rocks, with other similar rocks scattered round it. 'From the start,' he told us, 'I saw this as the result of a lightning strike. It could not have been anything else.' For ten years before this, Grab had been doing research on the factors that shaped the high Drakensberg over the 180 million years or so since the escarpment that forms the mountain range began to appear as a feature in the landscape. Like other geomorphologists, he focused mainly on the long-term changes that are caused by climatic factors such as rainfall, humidity and frost action.

A pit of shattered rock on top of the Drakensberg escarpment, thought to be the product of a lightning strike (photo Stefan Grab)



The discovery of the pit was the first step leading Stefan to investigate the possible impact of lightning strikes in the shaping of mountain forms. Five years ago, he was joined in his research by Prof. Jasper Knight, another specialist in the formation of landscapes. Their core study area was on the Lesotho side of the Drakensberg near Sani Pass. The Drakensberg is known to have a relatively high frequency of lightning strikes, with the escarpment having a higher strike rate than the interior valleys. (The region with the highest lightning-strike rate in the world is in the Ruwenzori Mountains in Central Africa.) Several features of the rocks at the pit discovered by Grab, and at other suspected strike sites, are highlighted in the research reports that he and Knight have made in support of the theory that they were made by lightning strikes, and not by frost

action or by people digging. They have found the following:

- The rock material is shattered into very big blocks, much too heavy to carry, spread over a radius of tens of metres.
- The rocks are scattered upslope as well as downslope as one would expect from moistureladen bedrock bursting under the impact of a lightning strike at a temperature of some 30 000 °C.
- Decisively, the magnetic signature of the shattered rocks, as measured with an ordinary compass and with a magnetometer, is quite different from that of the surrounding rocks. This is just what one would expect at a site that was struck by lightning.

Researchers Jasper Knight (left) and Stefan Grab (photo University of the Witwatersrand, Research Report 2013)

The research done by Grab and Knight suggests that landscapes with a high rate of

lightning strikes can change much more quickly than was previously thought. Their findings were first published in 2013. Since then they have attracted a great deal of attention from mountain geologists around the world, and also from French and Swiss documentary film makers.

Report by John Wright

Re-making landscape and place: an archaeology of a 19th-century mission station in north-western Botswana (Pretoria, 4 August 2016)

Dr Ceri Ashley, Senior Lecturer in Archaeology at the University of Pretoria

For three years, from 1893 to 1897, an intrepid party of missionaries from the London Missionary Society sought to establish themselves at Lake Ngami in the central Kalahari just south of the Okavango Delta. Dr Ashley told us about the excavation of the mission site and discussed the ideals prevalent among missionaries at the time. The short period of occupation meant that the site had no layering and thus offered an opportunity for research within a clear-cut timeframe.

The missionary explorer David Livingstone opened a route to the north in 1849 when he travelled from his base at Kolobeng in search of Lake Ngami. European missionaries, hunters and traders followed soon afterwards. The focus of the missionaries was not only on spreading the word of God. They sought to bring about a material transformation in people's lives as well. They believed that the revitalisation of the African soul required a revolution in habits that began at home with self-improvement and conservative dress. They tried to impose social structure through the organisation of space, believing that by modifying space they could shape behaviour. They sought to change the landscape to make it more familiar, based on what they had known in Britain. They created walls, boundaries and pathways in straight lines. At that time, African settlements were focused on a central cattle enclosure, with domestic activities taking place in the surrounding space. Sites moved quite often as the agricultural viability of the land became exhausted. The way Africans structured space was very different from that aimed at by the

missionaries.

The missionary party to Lake Ngami was led by Alfred Wookey, who was accompanied by John Reid, an artisan, and a Tswana evangelist, Mogodi. They left Palapye in April 1893, arriving in the Khwebe Hills in mid-July. The area was very flat with few hills, but they chose an elevated site, considering the hills to be healthier and away from the miasma of a swampy, wet environment. They chose to be at some distance from African homesteads, which they perceived as dangerous places because of their heaps of refuse. For his part, the village chief, who also controlled space, did not want the missionaries to be too close.

By October 1893 the missionary part had built a cottage measuring 40 ft by 16 ft, which established a feeling of permanence. The English ideal of layout was maintained, and eventually three houses with gardens in front of them where situated along a 'street'. A strong distinction between public and private space was reflected in the layout of the buildings, and hierarchy was represented by the relative sizes of the houses. Excavations have revealed stone foundations, a large amount of glass, metal nails, screws, and nuts and bolts, all of which must have been brought in over a great distance. Remnants of imported foodstuffs and medicine were also present, as well as European china and toys. No locally produced artefacts were present, and the indication is that life was modelled on that of European society.





Cut off as the missionaries were from the rest of the world, they experienced ill-health and emotional loneliness and eventually lost their momentum. Their crops were destroyed by locusts and leopards killed their cattle. Reid was attacked by a leopard and had to return to Britain, crippled. Worn down by repeated bouts of malaria, Wookey also returned to Britain to convalesce and by 1897 the missionaries' idealised model of a mission had been abandoned.

Report by Pamela Küstner

Traditional glue, adhesive and poison used for composite weapons by Ju/'hoan San in Nyae Nyae, Namibia: implications for studying hunting equipment in prehistory (15 September 2016) *Lyn Wadley, Honorary Professor of Archaeology, Evolutionary Studies Institute, University of the Witwatersrand*

Prof. Wadley's lecture was based on the work of a research team focused on three villages in the Nyae Nyae conservancy in Namibia on the border with Botswana, where the Ju/'hoan hunters still make and use traditional hunting weapons. The fact that traditional techniques are still being used enabled the team to make comparisons with evidence found at sites in South Africa, namely at the Sibudu and Border caves. These comparisons show that there is little sign of continuity in the recipes that were used at these sites. This could be in part for ecological and geographical reasons, but all required great skill and precision in production. The oldest adhesives and poisons have been in existence for around 65 000 years.

In the Nyae region there are two types of paste used for the assembly of weapons. The simple (one ingredient) 'glue' is made from the *Ammocharis coranica* bulb, which is collected after rainfall. The scales around the bulb are removed and the bulb replanted. A fire is made and the scales are pounded to a pulp after heating. The pulp is then rolled into a ball. The pliancy of the material is better when the pulp of a female plant is used. Another form of glue is prepared from the gum oozing from the *Terminalia sericea* tree. The gum is masticated and applied to a glue stick for later use. To produce an adhesive (a more complex product), the roots of the *Ozoroa schinzii* bush are used. Some roots are left, so that the bush can survive. The roots are notched and burnt over a fire. A milky, latex-like substance flows from the notches. It is mixed with the ash of burnt grass and is applied to a glue stick for later use.

To produce an arrowhead, a bone or stone would traditionally have been fashioned, but today a piece of fencing wire will be hammered into an arrowhead and this will be attached to a stiff grass shaft. As a result, farmers would often find holes in their fences, but this has been overcome by rings of wire being attached to fences to facilitate arrow production! Great care is taken to ensure that the grass shaft is perfectly straight. This is often done by laying the shaft on hot coals, the process being repeated until the shaft is perfect. The armourer then applies the black *Ozoroa* adhesive to the shaft and tightly winds kudu sinews on to the adhesive, which prevents the shaft from splitting. The ends of the binding are left free of adhesive. The arrowhead, once inserted into the end of the shaft, is secured with *terminalia* adhesive, which also provides a foundation for the poison application.

The composition of poisons is also varied and imbued with symbolism. One ingredient common to all is the grub of the chrysomelid beetle found buried under marula or corkwood trees. The poison contained in these grubs is highly toxic to humans and therefore extreme care is taken when digging them out and handling them as there is no known antidote. The San hunters add the

sap squeezed from the tubers of the *Asparagus exuvialis* plant as an additive to the grub liquid. Evidently the asparagus has the effect of preventing a shot animal from urinating, and the poison is thus held in the body longer. Alternatives to the asparagus are *Harpagothytum procumbens*, an extract from the bark of the *Acacia mellifera* tree, and snake beans, which are all powdered down.

The poison concoction is applied with great care to the adhesive with a special stick. Arrows held in hunting bags are invariably covered with leaves and the bags kept out of reach of children. Animals struck by these arrows will take a couple of days to die.

Report by John McManus

Tracing roots in cognition: creating a 3-D forebrain atlas of the Nile crocodile (13 October 2016)

Brendan Billings, Curator of the Raymond Dart Collection of human skeletons at the University of the Witwatersrand

Berendan Billings, who is completing a PhD at Wits, started his talk by explaining that cognition is defined as the mental action or process used to acquire knowledge through thought, experience and the senses. As such it is complex behaviour and it can be evaluated in animals using external interpretations, such as experiments or comparisons between captive and non-captive populations, or by internal interpretations, such as mapping the brain. Cognitive toolkits consisting of various complex tasks had already been used on a variety of animals. Examples included using mirrors to test for self-recognition, identifying whether animals use tools and investigating whether animals can apply their existing problem-solving tools to novel situations. Experiments of this nature have already established that both mammals and birds exhibit complex behaviour.

Instead of using such toolkits, however, Brendan's research is to use magnetic resonance imaging (MRI) to investigate the brain reactions of a young Nile crocodile when exposed to various stimuli. Various difficulties had been encountered, such as the size of the crocodile – only a young animal weighing between 700 g – 1 400 g can be placed in the MRI; the body temperature of the crocodile – as reptiles are unable to regulate their body temperatures, temperature fluctuations had to be avoided; and, finally, the fact that crocodiles can indulge in unihemispheric sleep was a factor also requiring control.

Although Mr Billings' investigations are still under way, he told us that his initial findings showed that the test crocodile responded differently to different colours and that there was also activation of the brain for various visual and auditory stimuli. The research had the ultimate aim of pinpointing the brain regions that were activated by each stimulus, whereafter it was to be investigated whether there was any correlation between these results and the forebrain atlases already obtained from other animals. Such findings could enable researchers to establish evolutionary pathways between different animals. **Report by Louise Mackechnie**

20 August 2016

Pushing the boundaries – issues in Southern African archaeology

Controversies in defining humanity and intelligence in archaeology: Lessons from our early hominin ancestors

Dr Matthew Caruana, post-doctoral fellow in archaeology, University of Johannesburg

r Caruana began his talk by noting that that there are no academic positions in South Africa for Early Stone Age (ESA) archaeologists. The ESA is generally considered to extend from 2,6 million to 400 000 years ago. The period is seen as a pejorative, as 'modern' humans seem to be linked with the Middle Stone Age (MSA) and the evolution of *Homo sapiens sapiens*. The concept of 'modernity' is often seen as cognitively and behaviourally unique amongst hominins. Evidence for this is seen in the use of ochre, engraved ostrich eggshells and stone points at the Blombos site, which date from 100 000 years ago. He asked whether this really separated us from earlier hominins along a simple line of evolution.

Matt quoted from Curtis Marean (2010), who wrote, 'I suspect that a driving force in the evolution of this complex cognition was strong, long-term selection acting to enhance our [modern] ancestors' ability to mentally map the location and seasonal variation of many species of plants in arid environments, and to convey this accumulated knowledge to offspring and other group members'.

The use, manufacture and seasonal use of tools is not unique to humans. Chimps do this annually, and remember when and where to use their tools. They pass this knowledge to their offspring. Matt showed a video of a chimp in Japan who could remember the correct sequence of numbers on a computer screen better than a human being.

Non-modern, Acheulean tool-makers were truly renaissance people, from 1,7 million years ago. They invented a technique that defined all subsequent technologies, modern human or otherwise. Two million years ago at Kanjera South in Kenya, there is evidence of the deliberate butchery of antelope, which suggests organised hominin hunting patterns. At Bilzingsleben in Germany, a site dated to about 370 000 years ago, there are non-utilitarian cut marks on elephant tibia that may be an indication of symbolic engraving by *pre*-Neanderthal hominins. This shows that higher cognitive functioning in hominins is evident before the MSA. The notion of a sudden, abrupt development of human cognition is not supported by this evidence.

Matt concluded with a quotation from Charles Darwin. In *The Descent of Man* (1871) he stresses the continuity of cognitive development: 'Nevertheless the difference in mind between man and the higher animals, great as it is, is certainly one of degree and not of kind'.

Report by Hilary Geber

Back to the future for Later Stone Age research: continuing the debate

Dr Tim Forssman, postdoctoral fellow, Rock Art Research Institute, University of the Witwatersrand)

Tim Forssman opened his talk by drawing attention to the diminishing focus on Later Stone Age (LSA) hunter-gatherer research in South Africa with the exception of rock art. As long ago as 2005, Prof. Peter Mitchell voiced his concerns in the *South African Archaeological Bulletin*, saying that there was a need for new paradigms to reinvigorate interest. These concerns were repeated nearly ten years later by Prof. Lyn Wadley in her retrospective in the *Bulletin* in 2014. She lamented that while there was a proud legacy of Stone Age archaeology, a succession of Stone Age fieldworkers had not been established and there had been few theoretical advances in more recent years.

Tim went on to celebrate the research that took place from the 1970s to the late 1990s. Changes in the material record, settlement patterns, subsistence habits, climatic adaptability and ethnographic analogy were some of the topics investigated. We were shown pictures of backed tools from Dzombo, which indicated the development of trade, and scrapers from Little Muck which were used on hides and hard material. Tools from Wilton, Robberg and Oakhurst were also shown. Evidence of the presence of hunter-gatherers or foragers, also known as Bushmen, San, Sonqua and Khoisan, was recognised by the following remains:

- A wide range of formal tools (e.g. awls, borers, adzes, etc.)
- The hafting of stone and bone
- Hunting, trapping and snaring equipment (fishing included)
- Tools for acquiring and preparing food (e.g. bored stones, grinding stones, bowls)
- Jewellery and ornamentation (e.g. beads, pendants, leather clothing, ochre)
- Ceramics, metals and remains of domesticates in later assemblages
- Rock art

It was suggested that the study of the tools and techniques neglects the people concerned. There would possibly have been changes in the distribution of population following the introduction of livestock. The site context would also be important. Settlement patterns indicated that a variety of sites were occupied, ranging from large and small rock shelters to open-air camps to farmer homesteads. LSA studies need to expand into new geographical areas rather than being focused on coastal areas. How did the foragers integrate into the farming context? Did they continue living their established way of life when surrounded by farmers? For example, Ed Eastwood had suggested that Y-shapes in rock art, which represent loin cloths/aprons, were motifs introduced into the middle Limpopo Valley by herders. Foragers and farmers then included these motifs in their own art, which speaks of intense interactive networks.

Tim advised that it was now thought that by persisting in dividing people into predetermined ethnic groups, we were losing track of their interactions. We had to find a better way to study them. Students all over the world were learning about the San who are the ancestors of southern Africa's indigenous hunter-gatherer community. They had played a role in shaping modern South Africa. It seemed unfortunate that parts of their heritage were not receiving adequate attention. There needed to be a renaissance, a shift of interest from people-environment interaction to people-people interaction. The focus of LSA research in southern Africa had to be adjusted and a progressive, multi-stranded approach adopted. **Report by Pamela Küstner**

The infiltration of the first herders south of the Zambezi and their relation to contemporary East and Central African cultures

Karim Sadr, Professor of Archaeology, University of the Witwatersrand

Prof. Karim Sadr reminded us that livestock had played an important role in South African culture and history. Much of southern Africa was good ranching country and in many traditional societies, brides are obtained in return for livestock, so one could say that the reproduction of the human society in this region had often depended on the availability of livestock. Livestock greatly influenced the early colonial history of South Africa as well, insofar as the Dutch East India Company had established its refreshment station at Table Bay in 1652 precisely because the local Khoekhoen (Hottentot) herders were willing to supply them with beef and mutton. The expansion of the colony initially was for access to greater numbers of livestock.

However, livestock was not native to southern Africa. Sheep, goats and cattle were all first domesticated in southwestern Asia. Since at least the late-19th century, scholars considered who brought the first livestock to southern Africa. Initial speculation implicated ancient Egyptians and the Lost Tribes of Israel, among other equally far-flung theories. More recently, thanks to historical linguistic studies, attention focused on the ancestors of the Cape Khoekhoen, the Proto-Khoe, as the most likely candidates. But the topic remained contentious. A long-held view was that Iron Age Bantu-speaking peoples brought the farming way of life and domesticated animals to the middle stretches of the Zambezi basin, where Proto-Khoe adopted the skills, became herders and then themselves gradually drifted to the southwestern Cape in their never-ending search for fresh pastures. However, a sizable collection of radiocarbon dates now showed this model to be untenable. The earliest sheep bones in southern Africa were several centuries older than the earliest Iron Age farming villages and they invariably occurred at typical Wilton Later Stone Age (LSA) sites that were presumably occupied by the San. The sites showed no signs of being associated with a sizable migration or demic diffusion of outsiders.

Karim Sadr told us that a new analysis of the distribution of stone toolkits from a large sample of sub-equatorial LSA sites, coupled with recent studies on the distribution of San languages and the genetic markers of southern African populations, had revealed the high probability that the earliest sheep reached southernmost Africa by one or more periodic infiltrations of small groups of northern San hunter-gatherers. The earliest of these events may have taken place a thousand years before Iron Age farmers reached the Zambezi. Three subsequent events can also be isolated and it may be that the arrival of the Khoe language and genetic markers in the southwestern Cape can be attributed to one of these later episodes of infiltration and/or demic diffusion.

Report by Barry Jacoby

Should we throw away the baby with the bath water? Moving beyond cultural boxes in Southern African Iron Age research

Dr Foreman Bandama, University of Cape Town

r Foreman Bandama and his colleague, Professor Shadreck Chirikure, are investigating whether the classification of various Iron Age settlements in southern Africa in the 1970s and 1980s is still valid. At the time, settlements were classified in two ways, either by examining how space and structures were used in the settlements or by identifying specific

ceramics found at settlements and then linking settlements with similar ceramics together. While this approach enabled settlements to be broadly categorised, Dr Bandama and his colleague have concluded that many settlements may have been incorrectly classified, resulting in the settlements being forced into the incorrect 'cultural box'.

Their research was triggered by intuitive feelings that sites such as Mapungubwe and Great Zimbabwe had been classified as being similar when there appeared to be profound differences in the structures of each site. Initially the researchers examined the artefacts that the original classifiers used to link sites together. They found that at some sites only a handful of artefacts had been used to make the classification, while the bulk of the artefacts had been ignored. Investigation by them of the ignored artefacts revealed that they either provided evidence for a different classification, or were simply too difficult to classify at all. The researchers also found that there were only vague guidelines for classifying the original artefacts in the first place, so it was difficult to determine what made artefacts similar or different.

With regard to pottery classification, Bandama and Chirikure felt that attributing changes in decorating styles to interactions between different groups could be invalid as these changes could be due to creative processes. They suggest that the same patterns may not only have originated in more than one place, but also that people in different places may give different meanings to the same pattern. When interrogated, modern potters were unable to supply reasons for changes in their decorating style. The researchers had similar questions about the allocation of land use in settlements. Recent excavations had revealed that when different people move into settlements they might give different meanings to existing structures. For example, a waste site for a later settlement may be located on the cattle kraal used by earlier inhabitants at the same site. They also discovered that only a small selection of the many earlier settlements had been investigated. Dr Bandama recommended that more flexible interpretations be applied to future investigations and that students of archaeology should go back to basics when reinvestigating sites and not let previous classifications influence them. **Report by Louise Mackechnie**

Qing, Soai and the Cave of Barwa: rock art interpretation in contention

Dr Jill Weintroub, Honorary Research Fellow, Rock Art Research Institute, University of the Witwatersrand

S outhern Africa's rich heritage of rock art is internationally widely known and celebrated. Predominant in the minds of most people who have viewed it are the fine-lined, multicoloured figures of human, animal and mythical beings found in hundreds of rock shelters in the mountains of KwaZulu-Natal and Lesotho.

It seems impossible to separate conceptions of this art from the interpretation dominant today, in which the art is seen as an expression of shamanism and the healing dance, and of a particular hunter-gatherer rain-making ritual. But the interpretation of rock art, like all systems of thought, has a history and a politics behind it and has always been contested. In her talk, Dr Weintroub outlined four phases in the history of the interpretation of rock art in southern Africa.

- The two centuries or so before the 1870s, when numbers of travellers noted the existence of 'ancient' paintings and rock engravings, but did not give them much attention.
- The 1870s to about 1910, when writers like Joseph Orpen saw the paintings as expressions of the mythology of the hunter-gatherers or Bushmen who had painted them. Later, Frobenius



The upper Senqu Valley where the unplanned exchanges between Qing and Orpen on the topic of rock paintings occurred (photo Justine Wintjes, from On the Trial of Qing and Orpen, JM de Prada-Samper et al, 2016, Johannesburg: Standard Bank)

and Dorothea Bleek saw rock art as an expression of child-like views of the world, in keeping with European notions that the Bushmen were the surviving representatives of an early stage of human development.

- The period from 1910 to 1970, when writers like Henri Breuil saw rock paintings as the product of an 'art for art's sake' mentality, a product made simply for the pleasure of creating something aesthetically pleasing. On the other hand, in the view of Dorothea Bleek much of the art could be seen in historical terms as depictions of actual events in the experience of the painters.
- The 1970s to the present, when the study of rock art became academically well established for the first time, particularly among archaeologists. The shamanistic interpretation developed by Prof. David Lewis-Williams at the University of the Witwatersrand, largely through the use of detailed ethnographic analogy, became predominant. To a great extent, this was because of the rigour and precision with which he presented his arguments in numerous publications. This approach saw the art primarily as an expression of hunter-gatherer or San spiritual beliefs. Other researchers were concerned by the failure of protagonists of the shamanistic hypothesis to focus systematically on the historical contexts in which the art had been produced, particularly in the period of interaction between hunter-gatherers, pastoralists and farmers from about 2 000 years ago. These researchers sought to focus on the art as a product of spiritual belief, especially in social and political contexts. They were hampered, though, by the difficulties of establishing firm chronologies for the making of the art.

The interpretation of rock art, according to Dr Weintroub, always fits into wider intellectual currents and debates. It says as much about the interpreters as it does about the art itself. **Report by John Wright**

Does archaeology matter? South African archaeology through the needle

Dr Ndukuyakhe Ndlovu, Senior Lecturer in Archaeology, University of Pretoria

r Ndukuyakhe Ndlovu is a PhD graduate from Newcastle University in the United Kingdom. He has over 15 years' experience in heritage site management, working for both provincial and national governments in South Africa. By means of case studies, such as the controversy over coal mining on the borders of the Mapungubwe World Heritage Site, he argued that archaeology in South Africa is not sufficiently relevant to local communities and is not serving their needs. Academic 'experts', including archaeologists, put up major opposition to mining without meaningfully engaging with the local communities during the seven years the site had been a World Heritage site. The reality was that archaeological practice, as presently applied, 'does not put food on the table'. Archaeologists involved communities when it suited them; when they want to satisfy the 'feel good' factor, an attitude also encouraged by funding agencies.

Dr Ndlovu is of the opinion that current heritage legislation is still based on 'colonial' thinking and does not take sufficient cognizance of traditional indigenous custom and practice. This applies not only to South Africa, but the whole continent. Much emphasis is placed on physically protecting heritage monuments, without regard for the spiritual significance of heritage. More effort should be directed at incorporating traditional management systems, to making heritage more relevant, and to attracting young black people into studying archaeology.

While there has been an increase in the number of black people entering the discipline, they were not yet playing a critical role in reshaping it, Ndukuyakhe said. Instead, the majority had undertaken heritage management projects for their studies and secured employment in heritage agencies. This meant that the perspectives of black scholars in archaeology have been less pronounced than they should be. For instance, some of the scholars were challenging the predominant view, one which underpins the influential notion of the Central Cattle Pattern, that cattle are the most significant domestic animals. The fact that in African culture goats have much greater ritual significance is rarely referred to by archaeologists.

Addressing the current unsuccessful trend of marketing heritage as an economic resource, Dr Ndlovu argued that academic 'experts' had failed in the projects they had led over the years. He used the failure of rock art centres to attract significant numbers of tourists to illustrate his argument. Too many heritage projects were overambitious and therefore likely to fail. In fact, the declaration of heritage sites often lead to the disempowerment of the local communities. In conclusion, Dr Ndlovu asked for whose benefit we were protecting heritage. Was it for the 'experts' (archaeologists, historians and other academics) or the general public? There was a need to transform the discipline of archaeology both racially and in terms of knowledge production, and to address the problematic approach of gaining community support through archaeo-tourism projects. **Report by John McManus**

OUTINGS AND EXCURSIONS

Constitution Hill outing

(21 February 2016)

A walking tour led by Jo Buitendach of Past Experiences

Jo studied archaeology at the University of the Witwatersrand and in her honours year in 2008 won ArchSoc's Van Riet Lowe Top Student Award. What was significant about her leading the Constitutional Hill tour was that Jo achieved a Masters at the University of Cape Town with a thesis based on the graffiti at the Number 4 Prison, which was the focus of the tour. The Johannesburg Fort and the surrounding buildings, which include the Number Four and Women's prisons, were the first part of Johannesburg to be 'regenerated' after 1994, and were seen as a bridge between Hillbrow and Braamfontein.

We started our visit below the fort ramparts at the forbidding main entrance, above which appears the coat of arms designed by Anton van Wouw. The entire precinct is well maintained as a heritage site. We climbed a few stairs and walked along the top of the ramparts of the fort from which vantage point one has a panoramic all-round view of the city, but, more closely, the rather degraded Hillbrow area. The prisons and fort were constructed by Paul Kruger's government in 1893 in anticipation of possible future conflict with the troublesome 'Uitlanders' in the city. They were designed by Kruger's favourite architect, Sytze Wierda, who designed many significant government buildings, including the Palace of Justice in Pretoria and the Jeppe Street post office. In 1896 the ramparts were added, which blocked the prisons from view.

Jo described the modus operandi of what was a grotesque system under Apartheid. Although the white community knew of the existence of the prisons, to the residents of Soweto 'Number Four' was legendary. The men's prison consisted of communal and solitary cells. We visited both and Jo gave us a description of the horrible life here. In the communal cells there were no beds, just blankets on the bare concrete floor, one next to another without any space. Gangs were rife in the prison and in each of the cells a leader would arise. He would create a sleeping space for himself and his henchmen a metre separate from the others in the cell. Each cell just had one open toilet for common use. Whether the gang leader had any toilet privacy is not known! Interestingly, political prisoners were not subjected to the gang hierarchical system – presumably as a sign of respect. However, one of the more inhumane aspects of the system was that honest men picked up off the streets without their official pass or 'dompas' and political activists were dumped into cells cheek by jowl with murderers and other criminals.

The prisoners ate at benches and tables in an open, covered courtyard – right next to the open latrines. The metal plates used were never washed and were encrusted with food remains. A display board illustrates the racially different 'menus' for whites, coloureds and blacks. The black food allocation, needless to say, was much less nutritious. Even the Christmas 'extra' was also shown: for whites, a pudding, for blacks, just 'one pint of tea or coffee, one ounce of sugar and milk, if available'. A film illustrated the application of the law under apartheid. Many famous black activists spent time here and they are celebrated with photographs and quotations. Mahatma Gandhi spent time here and there is a bust to his memory outside the cells. The women's section was host to Winnie Mandela and Albertina Sisulu, amongst many others.

From the communal cells we walked down to the solitary cells. These were windowless,

lightless, bedless caves. Graffiti was engraved on the inside of most cell doors. Inmates would use stones picked up in the yard or pieces of tin cans to make the crude engravings. Some were political in nature, e.g. the phrase 'b power', others were just a name or gave the place they came from. An interesting engraving was 'Nina Simone', a popular Afro-American jazz singer who turned to opposing political violence in the USA; obviously, she had a follower in South Africa! Jo described the nature and function of graffiti. The fact that some doors had no graffiti proved the saying that 'Graffiti breeds repeats'. Apparently, in the past, political graffiti was not common in South Africa. However, it is now becoming increasingly popular as a means of expression, particularly among radical youth. After the depressing prison, we visited the Constitutional Court, which is replete with symbolism of the reformed, open and equal South Africa, and marked a striking contrast with the rest of the tour.

The radioactive landscape: stone walls, phiris and skeletons in the Pilanesberg National Park (29 May 2016)

With Francois Coetzee, Department of Anthropology and Archaeology, Unisa, and Graham Reeks, PhD archaeology candidate at the University of the Witwatersrand

t our first stop, the village of the Bakgatla ba Kgafela people, Francois outlined the history of the area. The Pilanesberg National Park is named after the Tswana chief Pilane. The northern area of park was originally the home of the Bakgatla, while the southern area comprised farms, including several owned by Paul Kruger in the 19th century. In the 1960s the government bought up the farms, demolished most of the dwellings and farm buildings, and declared the area a game reserve. Chief Tidimane Pilane of the Bakgatla agreed to the inclusion of their mountainous region in the reserve and inhabitants were moved to Saulspruit, east of the reserve.

We went on to explore an Early Iron Age village that dates from about AD 300 to 1000. The village was laid out according to the Central Cattle Pattern and the stone walling is still mostly intact. The size of the primary enclosure was determined by the number of cattle that had to be accommodated. The chief was buried upright in this central area. The homesteads were situated around the central enclosure. The living areas were determined by rank and sex, and burials took place in these designated areas. Certain stone enclosures were designated as higher and lower courts where public issues were discussed, judgements were passed and punishments were decided on.

The next site we visited was scarred by many dongas and carried little vegetation. Many skeletal remains, believed to date to the 11th century, were found here. The degree of degradation of the site enabled the exhumation of remains and their removal to appropriate laboratories with less problematic legal procedures than usual. Anatomical examination revealed that the population was healthy. They had well-preserved teeth, which suggests that fluoride existed naturally in the area. The remains have been lodged in the Department of Anatomy at the University of Pretoria.

The way to our third site was blocked for some time by a large lone elephant indifferent to our need to adhere to a timetable! Graham told us that just before the park was declared, a large deposit of uranium and thorium was discovered. The establishment of the park put an end to prospecting, so one could not speculate on the impact of the localised radioactivity on human and

animal life over the centuries. Graham also gave an interesting account of the region's geological formation. About 1,9 billion years ago a huge outflow of volcanic rock formed the Bushveld Igneous Complex. It represents the largest intrusive formation in the world, being 5 km to 10 km thick. It is a storehouse of mineral wealth.

After our picnic at a beautiful site overlooking a dam, Francois outlined the initiation rites that are an integral part of local tribal life. Initiation usually takes place in winter and a ritual fire burns throughout the ceremony. Initiation is tough and sometimes ends in death. Initiates, having passed their rite of passage, are considered men in the community and no longer herd cattle. We were accompanied on our journey by two armed guards and by two members of the 'Friends of the Northwest Parks', who volunteer supervisory duties at the weekends.

Report by Gerry Gallow

Telperion and Ezemvelo weekend excursion(25 & 26 June 2016)With Anna Batchelor-Stevn. archaeologist and environmentalist

Saturday 25 June: Ezemvelo and the adjoining Oppenheimer-owned Telperion nature reserves are situated to the north-east of Bronkhorstspruit. The large reserves with their abundant herds of antelope and other game cover well-watered rolling grasslands with rocky outcrops. After our arrival at the Ezemvelo gate, we were conducted to a ritually important Iron Age smelting site on Ezemvelo by one of the game guards, Maroti Tau. His family had lived on land in the vicinity for four generations when, in the early 1980s, they were moved off by the owners to make way for commercial farming operations. During our walk to the site he pointed out piles of stones that had been cleared off the land by the families that had lived there to make fields for growing maize, water melons and other crops.

The smelting site is at a spot chosen for its seclusion on the edge of a steep scarp overlooking the Wilge River. As we arrived, the guard asked us to take off our hats to show respect for the ancestors. Anna Steyn, who has a Masters degree in rock art from Unisa and is currently completing an MSc degree in environmental management at North-West University, conducted us round the site. She gave us an informative talk on the process of smelting, based on recorded oral materials and on ethnography. The process, she told us, was not simply a stage in the production of iron: it was also a way of communicating with the ancestors, and so was accompanied by important rituals, particularly in times of danger or hardship. Smelting was very much a male-dominated activity, with women strictly not allowed near it to prevent possible pollution.

First, ritual material like ochre was placed deep in the earth to establish communication with the ancestors, then the furnace was built up over it with clay obtained from nearby. It was built in the shape of a granary, with a slit in the side representing the female organ and the tuyere for conducting air into it representing the male organ. The furnace was charged with a mixture of iron ore and charcoal made from wood obtained from the slopes below. It was then fired. Men operated a set of bellows in shifts to maintain a constant flow of oxygen and keep the temperature of the furnace high. At the end, when a bloom of iron had formed, and the furnace had been allowed to cool, it was broken open and the bloom extracted. It was then taken to the village, like a child being introduced into the community. The smithy process was done in the village, with the bloom being reheated and impurities hammered out to produce the iron for working into implements and weapons.

In the afternoon, we visited the ruins of a homestead below the scarp which had once belonged to a Mr Tlhaphi, a well-known local herbalist. The homestead had survived the clearances of the

early 1980s because the bulldozers used in the process got stuck on the muddy track. Anna Steyn told us that she had investigated the homestead 10 or 12 years previously to see if it had any potential as a tourist site, but nothing had come of plans for it. The day ended with a very social joint braai at Telperion House. **Report by John Wright**



The ruins of the homestead that once belonged to a Mr Tlhaphi, a well-known local herbalist (photo Reinoud Boers)

The following morning, we set out by vehicle and on foot to see the highlight of our visit, the Telperion Shelter, which is the most significant archaeological and historical feature in the region. Situated in a secluded valley, partway down a cliff near the junction of the Wilge River and the Saalboomspruit, it required quite a long walk and a scramble at the end to get there, but the effort was well worth it. The rock overhang, which is well sheltered by trees, has been used over millennia, from the time of Middle Stone Age hunter-gatherer people. The oldest stone tools discovered at the Telperion reserve date from between $\pm 250\,000$ and 70 000 years ago. The foragers lived there for tens of thousands of years before the arrival of Late Stone Age people, including the Bushmen, and fine-grained microlithic tools and rock art have been found at the shelter. What has surprised researchers was to find in addition handprints and geometric designs associated with Khoekhoe pastoralists at the shelter, who must have either lived at the shelter or moved through the area. The shelter also served as a refuge site and a relative safe haven during times of turmoil, with the final occupation by Boer women, their children and servants at the time of the Anglo-Boer War.

Once we had all gathered at the shelter, Anna Steyn described the 'amazingly intense history' of the shelter, which was researched by her and more recently by Tim Forssmann of the University of the Witwatersrand. Ostrich egg shell and pottery were found. The large rock face of the shelter is intensely covered by paintings, with traces of Bushman art such as a large yellow elephant with an eland within its outlines. The outlines of some animal paintings were marked by dots. Where stripes had been added to animal paintings, it was clear that these had been added later 'to put power over power'.

The Bushman art is dominated by Late White paintings, while in places one has to look through the Boer War graffiti of Afrikaner names to identify the older art. The names include





'DSJ van Rensburg', 'JD van Schalkwyk', 'AMHAE Echt', amongst others. Some of the names were misspelled and certain letters were written incorrectly. Other names, such as Maroti Tau, Khoi Khoi and Aplons indicated even later visitors, Anna Steyn said, or perhaps they could be from an earlier time, possibly the Korana. What was clear was that all visitors had wanted to leave their mark on the wall. **Report by Reinoud Boers**

Outing to Swartkrans hominid site

(17 July 2016)

With Dr Morris Sutton, Swartkrans Palaeoanthropological Research Project

r Sutton began the tour with a lecture on the history and significance of Swartkrans, which is one of ten sites dating back to 4,5 million years in the Cradle of Humankind containing hominin fossils. He explained how the dolomitic caves were formed by the action of rainwater and gave us the geological history of the site. The oldest fossil deposit here was 2,5 million years old, which was one million years younger than nearby Sterkfontein. He showed the group casts of famous skulls such as the Taung child, which was found in 1924, and told us how Raymond Dart had worked on it. Species found at Swartkrans included *Australopithicus robustus* (Paranthropus), *Homo habilis* and *Homo ergaster*. It was probable that two entirely separate species co-existed at the same time.

Tools found at Swartkrans date back three million years. By 2,5 million years ago they were fairly well developed. Some of these tools pre-date the emergence of the genus *Homo*. Burnt bone dated at one million years had been found at Swartkrans and was clear evidence of the controlled use of fire at that time. The site contained among the earliest burnt bone found at archaeological sites in the world. Oldowan stone tools were made by *Homo habilis* about two million years ago and the more sophisticated Acheulean tools by *Homo ergaster* about 1,6 million years ago.

Dr Sutton then took the group on a guided tour of the site. He discussed the weathering of bones, and the significance of cut and gnaw marks on bones. He explained the transition from man the hunted to man the hunter, discussing the difference between predatory behaviour and scavenging. He also explained the very complicated stratigraphy of the caves. The excursion was greatly enjoyed by all the participants. **Report by Barry Jacoby**

Heritage Day walk through Sophiatown

(25 September 2016)

Led by Mbali Zwane, heritage practitioner, researcher and tour guide at the Sophiatown Heritage Centre

Sophiatown, one of the oldest black areas in Johannesburg, is a legendary black cultural hub that was destroyed under apartheid, rebuilt as a white suburb under the name of Triomf and, in 2006, officially returned to its original name. Despite the violence and poverty in Sophiatown, it was the epicentre of politics, jazz and blues during the 1940s and 1950s. It produced some of South Africa's most famous writers, musicians, politicians and artists.

Our tour began at a park where there was an interesting board with pictures of Sophiatown's history-makers. Here our guide, Mbali Zwane, outlined the township's history. In 1899 Herman Tobiansky purchased the land from the Johannesburg City Council to develop a township. However, its proximity to Johannesburg's sewerage works proved to be a deterrent to whites and the township was mainly settled by black and coloured people. Tobiansky named the new

township after his wife Sophia and the streets after members of his family and the Royal family. The street names have remained unchanged throughout the political upheavals the township underwent. With its diverse population, Sophiatown became a vibrant place of music, art and poetry.

The first stop on our walking tour was the Cathedral of Christ the King in Toby Street, remembered mainly for Bishop Trevor Huddleston's commitment to the people of Sophiatown. Designed by the architect Fleming, the cathedral is situated panoramically on the top of a hill. In the garden, three pillars depict the Trinity. Bishop Huddleston's ashes are interred behind the first pillar to symbolise him as the Father. Two interesting township scenes decorate the walls of the cathedral. The one of children playing had a painting of Trevor Huddleston inserted. The other, which also depicts children playing in a street, also shows a woman with a baby on her back and a brazier on her head! During apartheid days, people were not allowed to light fires in the streets and vendors thus made the fires in braziers at home and carried these into the town with coals aglow to roast mealies for sale. Adjacent to the church is the Christiaan de Wet school, which is now attended by all race groups. The church garden has a verdant vegetable garden in keeping with the 'green' policy of the church, which was used as a community centre during apartheid years and declared a Heritage Site in 2004.

The Odin Cinema nearby not only showed films but also served as a meeting place for activists, including Nelson Mandela. It also attracted gangsters and street gangs who loved to dress up. We met Mama Elizabeth, whose family was removed from Sophiatown when she was seven. She enthralled us with stories about her family and people who had been moved and had come back. By keeping the street names unchanged, people's memories were jogged and reconnections made. She told us that only people born in Johannesburg were moved to Meadowlands in Soweto. Others were sent back from whence they had come. While blacks were moved to finished houses, the Indians were dumped in improvised camps in Lenz and coloureds were rehoused in the Western Coloured Township (now Westbury). However, some people received a permit to stay in Sophiatown, such as Dr Xuma. She talked to us at the place where once had stood a giant oak tree and which had also been a meeting place for activists.

We ended our tour at the Trevor Huddleston Community Centre, which houses the museum that was originally the home and practice of Dr Xuma. It has pressed metal ceilings and Oregan pine floors, and houses articles of interest and a photographic record of the history and demolition of Sophiatown. It was declared a Heritage Site in 2006. The Community Centre offers courses in many fields and encourages the 'greening' of Sophiatown. We were accompanied on our tour by two delightful children, Sihle and Zanile, who sang appropriate songs at the various stops and performed dances and enactments that greatly enriched our experience. As Mbali said, while the people, the township's vibrancy, its music and art were removed, the spirit of Sophiatown never died and is being rekindled in the new Sophiatown. For some of us 'oldies' it was a journey of remembrances and for all of us it was a great privilege to join with the returning people on their long walk to freedom. *Report by Gerry Gallow*

Coach tour to the stone-walled ruins of the Suikerbosrand

(23 October 2016)

Outing with Professor Karim Sadr, School of Geography, Archaeology and Environmental Studies, University of the Witwatersrand

The rocky terrain of the Suikerbosrand, just one hour's drive south of Johannesburg, is geologically dated to the period 3 000 to 1 650 million years ago. Aerial photography and Google Earth reveal the remains of different kinds of human habitation. The ruins of houses built by trekboers in the mid-19th century can be seen. The home built by the Marais family in 1845 forms part of the living museum in the Suikerbosrand Nature Reserve. The house is considered to be one of the oldest structures in Gauteng. Family graves are situated in a valley nearby. The reserve, covering 11 575 ha, is currently managed by the Gauteng Department of Agriculture and Rural Development.

Our outing by coach took us to the remains of several stone-walled homesteads dating to the Iron Age. Prof. Karim Sadr divides the structures into four main groups. Group I had a circular outer wall that would have demarcated the perimeter of the homestead, while an inner enclosure would have been for livestock. One of these settlements, situated at the top of a hill, was seen clearly from the bus. Although it was far from shelter and water, the sweet grasses in the vicinity provided good pasture for cattle. Dating of these ruins referred to as Type N (Maggs 1976) suggests that these dwellings date to the 17th century.

Group II dwellings were arc-shaped, with back courtyards. These were found at lower, more wooded elevations. Some clusters are considered to have been towns or megasites. They had a



ring of several smaller enclosures to house sheep and goats, and bigger ones for cattle. Middens are also evident. This group belongs to what is known as the Molokwane culture. The structures were built around 1800.

Group III people are believed to have inhabited the area in the 18th century. They favoured the north-western part of the reserve where the land was flatter, wooded and more arable. These settlements had a continuous perimeter wall, with a number of inner enclosures. Sometimes

The largest and most spectacular ruins in the Suikerbosrand Nature Reserve belong to a type known as Molokwane or Group II. They are from a from the few decades around 1800 and were abandoned with the Difeqane in the 1820s. straight walls separated households in the residential zone.

Group IV structures were not clearly defined in the satellite image and we do not know where these people come from. Some theories hold that they were Nguni who intermarried with Tswana, others that they were Sotho. For archaeologists, the 600 or so stone walled structures at Suikerbosrand, most of which are precolonial, pose intriguing challenges.

Report by Gerry Gallow

Exhibition walkabout: on the trail of Qing and Orpen

(5 November 2016)

With Dr Jill Weintraub, Honorary Research Fellow, Rock Art Research Institute, University of the Witwatersrand

The exhibition, On the Trail of Qing and Orpen, at the Standard Bank Gallery, Johannesburg, examined the history of a well-known article, 'A glimpse into the mythology of the Maluti Bushmen', published in the Cape Monthly Magazine by Cape colonial official Joseph Orpen in 1874. The article was based on stories and cultural information recorded by Orpen from a Bushman guide named Qing in the Maloti mountains of what is now Lesotho. Orpen's article has been at the foundation of the interpretation of southern African rock art since the 1970s. But relatively little was done to put it in the context of its times and this became one of the aims of the exhibition, which was curated by Justine Wintjes, with the assistance of Jill Weintraub and John Wright. After the walkabout with Jill Weintraub, ArchSoc members had the opportunity to look at an exhibition by Cyril Coetzee titled 'Air: Inspiration – Expiration' on the museum's upper level.

Year-end Magaliesberg cableway excursion (20 November 2016) With Morris Viljoen, Professor Emeritus, Department of Geology, University of the Witwatersrand

This excursion was aimed at showcasing many of Gauteng's and South Africa's geological superlatives and geoheritage sites from an excellent vantage point, the summit of the Magaliesberg above Hartbeespoort Dam. The history of the dam started in 1906 when a feasibility study for building an irrigation dam was prepared. In 1909, test holes were dug to establish whether the rock formation of the gorge cutting through the Magaliesberg was suitable for a dam of the proposed size. Construction started in 1916 and the dam was completed in 1923. Unfortunately, today the dam can suffer severe pollution from the high concentration of phosphates and nitrates in the industrial and domestic effluent that comes down the Crocodile and Magalies rivers. The dam gets its name from the hartebeest that evaded the hunters by hiding in the poorts.

We met at the recently re-established Hartbeespoort Cableway and ascended to the top of the Magaliesberg on a beautiful sunny day. The panorama was breathtaking. Along the well laid-out pathways many informative plaques pointed to geographic and geological features and told of historical incidents. Gathering us around him, Prof. Morris Viljoen gave us a fascinating and well-illustrated talk on the geology of the area. The Magaliesberg range has a long geological history – according to Vincent Carruthers the Magaliesberg is 100 times older than Mount

Everest and half the age of earth. Earth movement over millions of years formed deep slopes and ravines, and also created the mountain ridge that, tilting south, acts as a sort of demarcation line of the landscape north and south of the range. Prof. Viljoen pointed out to us eight world-renowned features that we could see or visualise from where we stood: the Bakenveld, the Bushveld Igneous Complex, the Pilansberg, the Tswaing meteorite crater, the Vredefort Dome, the Witwatersrand plateau with its outcrops of gold, the Cradle of Mankind and Cullinan with its rich diamond pipe.

To the north, the flat bushveld stretched into infinity. This area is very rich in minerals, with high concentrations of chromium, platinum and vanadium. Platinum and chromium mining infrastructure and a large ferrochrome plant were visible and Morris told us about some of the commercial enterprises, indicating that there are still many possibilities that can be explored in this area. Back at the cableway centre, we met in the conference room and Morris gave us another well-illustrated talk on the people that had inhabited the region. Of archaeological interest was that the earliest hominid species here dated back to about two million years ago to. In the early 1800s, one of the important chiefs was Mogale, after whom the mountains were originally named. Later, Shaka sent Mzilikazi to conquer the Sotho tribes of the area. Then came the Voortrekkers who effectively drove out Mzilikazi. Later that century, many battles of the Anglo-Boer War were fought in the Magaliesberg. Many artifacts, such as hand-axes, of the Early, Middle and Late Stone Ages have been found and many forts, battlegrounds and cemeteries have left mankind's imprint on the land, which, in 2015, was declared a biosphere by UNESCO.

The lovely weather, the fellowship of our group of travellers, and a wonderfully interesting guide made this, our last outing for 2016, a most memorable day. **Report by Gerry Gallow**



The ridges and valleys of the Magaliesberg (photo The Magaliesberg Biosphere Edition, by Vincent Carruthers)