

THE DIGGING STICK

Volume 14, No. 3

ISSN 1013-7521

November 1997

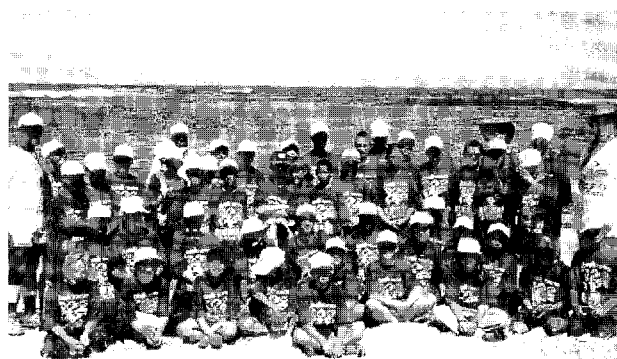
CLEAN-UP AT SPOEGRIVIER CAVE A PHOTOGRAPHIC RECORD*

Photographs and text by Andrew MacKenzie
adapted for *The Digging Stick*

The Spoegrivier Cave, Namaqualand coast, has come to prominence in recent years for the early evidence it contains for pastoralism (2100 BP and older) along South Africa's western seaboard. Media coverage in Namaqualand and more widely helped create local appreciation of the importance of the site, and the need to protect the cave began to be discussed in the area. De Beers Namaqualand Mines decided in 1997 it was time to do something about this matter and permission was obtained from the National Monuments Council and the Departments of Land Affairs and Public Works (the site is situated on state land) to carry out the work recorded here.

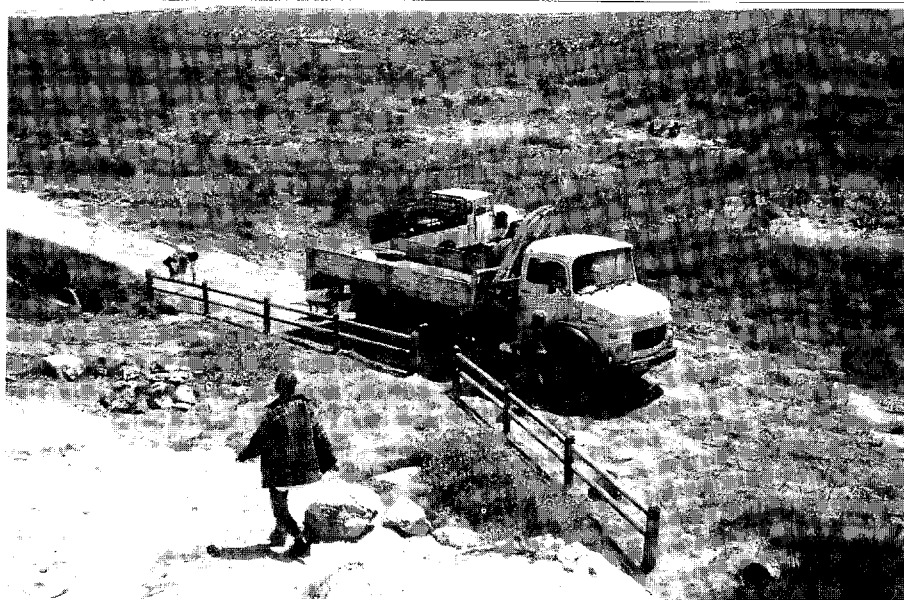


It was a big team effort. Help was provided by a Std 3 group including 11 children from Hondeklop Bay Primary School, and 35 pupils from Kleinsee Senior Primary, during a



coastal environmental education camp.

A fence was erected to prevent vehicles from being driven into the Spoegrivier Cave. A rock monument with signs was added to explain the archaeological significance of the site. The fence was erected by Namaqualand Mines' Farms Department a few days prior to the camp.



While removing litter, the children learnt about the history of the cave. The cave contains the earliest known evidence of domestic sheep in South Africa.

Directly dated sheep bones found in the cave date back to 2100 BP (Before Present), while other sheep bones have been found in association with material dating back 2400

years. From about 1930 BP the stone toolkit at the site changes, pottery appears for the first time, and sheep remains are more frequent. This could mean that Khoekhoe herders migrating southwards along the west coast began to use the cave, previously occupied by hunter-gatherers. Alternatively, erstwhile hunter-gatherers adjusted their worldview



and way of life to become pastoralists themselves. Which of the two scenarios applies is a crucial issue in on-going research.

For the entertainment and education of the others, various groups had to present a short drama depicting a day in the life of the people who used the cave in the past.

Rocks were collected to build a small, natural-looking monument, on which to place the information signs. The signs will explain the archaeological importance of the cave to future visitors.

The children enjoyed watching Yara Sopik, an artisan from De Beers Namaqualand Mines, as he cut up an old bull-dozer and removed other rubbish from the site.

The old bull-dozer was loaded onto a truck and removed for proper disposal at Kleinzee.

This project was sponsored by Namaqualand Mines, a company in the group of De Beers Consolidated Mines Ltd. Dr Lita Webley, of the Albany Museum - who has excavated at Spoegrivier - provided support and information for the initiative.



Andrew MacKenzie
Namaqualand Mines
P/Bag X01
Kleinzee
8282
Fax 0258-8072080

* A report, *A photographic record of work carried out at the Spoeg River Cave on Friday 10 October 1997*, was compiled by Andrew MacKenzie and adapted for *The Digging Stick*.

REFERENCES

- Webley, L. 1995. Further excavations at Spoegrivier Cave, Namaqualand. *The Digging Stick* 12(1):5-6
- Vogel, J., Plug, I. & Webley, L. 1997. New dates for the introduction of sheep into South Africa: the evidence from Spoegrivier Cave in Namaqualand. *South African Journal of Science* 93:246-248.

A letter to Dora Fock from Judith Burkitt, October 1955, reveals how her famous husband, Prof Miles Burkitt of Cambridge, advocated prehistory instead of Latin in schools - an early and noteworthy voice in favour of archaeology in education:

"His line was that prehistory is a splendid subject for...school children, since it provides something tangible they can study locally...a balance of outlook, and a hobby subject with interest to last a lifetime. There is not much money nor many jobs for professional prehistorians, but its a very splendid subject to be interested in and have an amateur knowledge of, for a lifetime. I have heard him talking about this often, pointing out the advantages of prehistory over Latin! - which many of our young learn." - Judith Burkitt, with reference to Prof M.C. Burkitt, October 1955.

From Mrs Dora Fock, P.O. Box 894, Windhoek, Namibia.

THE WORLD'S OLDEST ROCK ART? CUPULE ENGRAVINGS FROM THE TOP END OF AUSTRALIA

Sven Ouzman¹, Paul Taçon², Richard Fullagar² and Ken Mulvaney³

INTRODUCTION

Australian rock art represents an old and complex tradition of Aboriginal understanding and representation of physical and spiritual worlds. Though the scientific dating of rock art is not always relevant to Aboriginal people, who maintain that some rock art belongs to the creation period and has always existed, rock art dating can generate much controversy amongst archaeologists. A recent discovery from Australia is a case in point.

In 1992 Richard Fullagar of the Australian Museum excavated one of two sandstone shelters at a site called Jinmium in the Keep River area of Australia's Northern Territory (Figs.1&2). The Jinmium shelters are unusual in that their walls bear a singular kind of rock engraving in the form of small circular depressions or 'cupules' pecked into the rock support. A metre below the present surface level Richard found four cupules on a sandstone slab that had fallen from the shelter wall and became incorporated into an archaeological layer. Thermoluminescence dating (TL) of this layer indicates an age of between $58\,000 \pm 6100$ to $75\,300 \pm 7000$ b.p. and thus a minimum age for the engraved slab; making it the oldest dated rock art in the world (Fullagar *et al.* 1996). TL dating also indicates that the basal artefact-bearing archaeological layer of Jinmium is between $116\,000 \pm 12\,000$ and $176\,000 \pm$

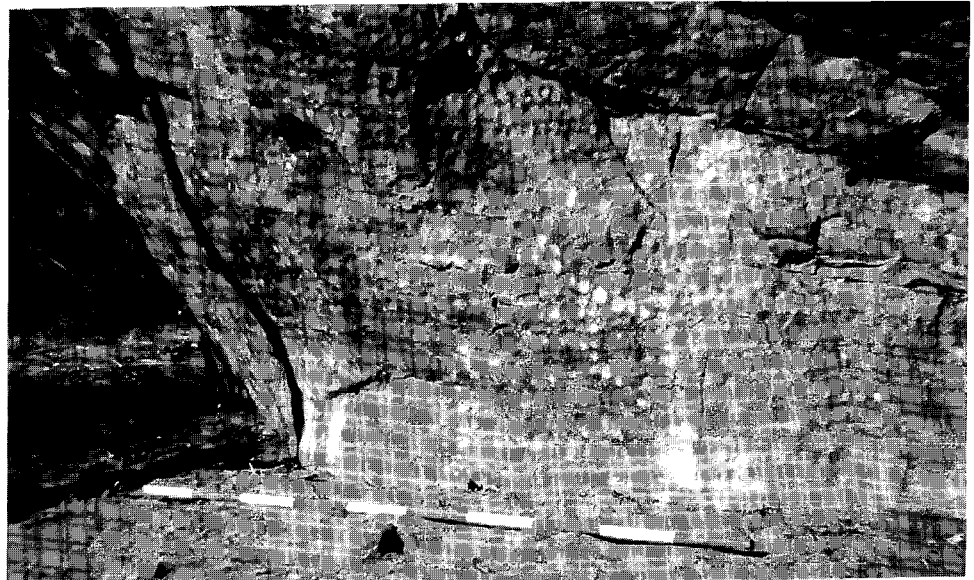


Figure 1: Photograph of cupules engraved on the vertical wall of Jinmium shelter.

16 000 years old; effectively doubling the previous oldest date for the first human presence in Australia (Roberts *et al.* 1990). The early Jinmium dates are controversial and have caused a media and archaeological frenzy (e.g., *Sunday Times* 22 Sep 1996). Unfortunately, this frenzy has diverted attention from the meaning of the singular form of rock art found at Jinmium. Another fieldtrip to the Keep River area was undertaken by the four of us to probe the meaning of this rock 'art'.

CUPULES

Cupules are an unusual rock art as they do not constitute obvious images but consist of small semi-hemispherical hollows, 20 mm - 150 mm in diameter and 10 mm - 70 mm deep, engraved on a rock support (Fig. 1). Cupules most often occur in clusters of between approximately half a dozen and 5 000 and are placed on horizontal, sloping and vertical surfaces. Cupules differ from grinding hollows, peck marks and pits in terms of appearance, distribution, size and do not appear to have

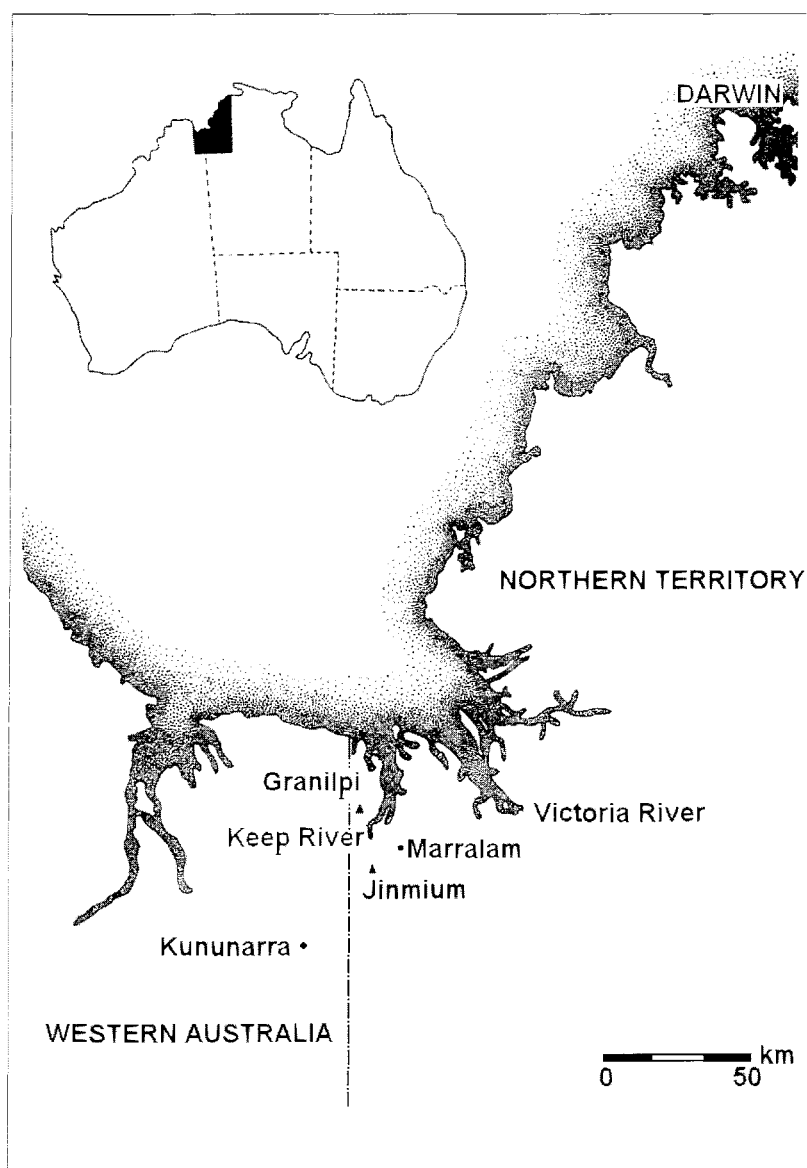


Figure 2: Location of Jinmium and Granilpi, Keep River area, Northern Territory, Australia.

been involved in utilitarian activities. Though visually ingenuous, cupules are articulated with a variety of 'natural' and 'cultural' places and spaces in a complex nexus of cultural marks that seem to relate to Aboriginal ideas of place and space. Cupules are located in two main spatial contexts.

First, cupules occur vertically on the walls of certain rock shelters and rocks and are often 'framed' by natural features such as cracks, folds and steps in the rock. Certain sites have such a concentration of cupules they appear sculpted. Such cultural modification of a site is analogous to manufacturing a stone tool from raw rock. Cupules may thus be more 'artefact' than 'art'.

Secondly, cupules occur on horizontal surfaces, both within and between sites. For example, certain 'natural' features such as rock apertures are nuanced by rows and clusters of cupules engraved at their edges. Apertures and cupules usually coincide with habitation shelters or 'cultural' places and there is a complex interplay between 'natural' and 'cultural' space. This insight was confirmed by a remarkable discovery at an archaeological site called Granilpi, located 28 km north-west of Jinmium (Fig. 2). At Granilpi there is a series of 35 carefully selected-for cupule-bearing rocks each of which is in direct sight of at least one other cupule-bearing rock. These 35 cupule-bearing rocks seem to form a concatenation or chain that links four 'cultural' rock shelters - each of which contains 'natural' features such as an archway, passageway and inner cave - to each other in a meandering route covering some 200 m. The Granilpi discovery is exciting as it suggests that the interstices between archaeological sites and the route(s) by which particular sites

were approached helped Aboriginal people define a relationship with the external world. In order to develop this argument it is necessary to review the age of Australian cupules.

DATING

Australia has the most comprehensively dated rock art corpus in the world (e.g., Flood 1995:173). A wide range of dating techniques have been applied to different kinds of rock art which increases our confidence in broad dating trends if not in individual dates. The most cautious approach to assessing the antiquity of cupules would be to momentarily suspend our (dis)belief in Jinmium's TL dates until comparable dates

from other sites are forthcoming. Significantly, most rock art researchers have always argued that cupules are 'old'. There are six strands of evidence supporting this contention.

1. Cupules are sometimes associated with Panaramitee rock art which comprises geometric forms, animal tracks, human prints and cupules. Panaramitee rock art is reliably dated to between 5 000 and 30 000 years old (Flood 1995:158).

2. In almost all known cases of superpositioning in Australia, engravings and paintings overlie cupules; suggesting a relative antiquity.

3. Most cupules have a very weathered appearance and post-manufacture weathering occurs on and through many cupules.

4. Some cupules are covered by thick, slow-forming silica skins.

5. Unlike most other Australian rock art, there is only a single known Aboriginal oral account relating to cupules.

6. Cupuled rocks are sometimes covered by archaeological deposit; as much as 1 m at the Jinmium shelter excavated by Fullagar.

Combined, these six strands of evidence carry sufficient evidential weight to indicate that cupules are an early form of Australian rock art. Accepting this relative antiquity, it appears that there may be a strong correspondence between cupules and the first human colonisation of Australia.



Figure 3: Photograph of the unusual topography of the Keep River area.

COLONISATION AND CONTROL

The first human colonisation of Australia is currently dated by ^{14}C and TL techniques to between 40 000 and 60 000 years ago and probably took place via the now partially submerged landmass that once formed the Arafura plain, located between northern Australia and Indonesia (Flood 1995:80). The Jinmium dates of 116 000 - 176 000 years ago for a layer with artefacts are, at first glance, startling. It is, however, possible that Jinmium was the home of a group of early Australian colonists who ventured inland, possibly along river courses such as the Keep River - further inland, that is, than most others whose sites are now submerged beneath the Timor and Arafura Sea. Newly arrived colonists would have as a priority the need to make a new and unfamiliar land familiar by constructing oral accounts of their arrival and journeys as well as by populating the new land with spiritual beings, events, places and visual cultural marks.

The structured nature and widespread distribution of cupules across the Top End of Australia suggest that cupules were a rock art concerned with journeying and the marking of places by early Australian colonists (see Taçon *et al.* 1997). It is tantalising to speculate that contemporary Aboriginal

concerns and fascinations with place and space, manifest in accounts of the Dreamtime, may stem from the literal and metaphorical journeys of the first Australians and it is fitting, and possibly not coincidental, that Jinmium and Granilpi mark the poles of a contemporary Dreaming track. It is further tantalising to speculate about the world-wide distribution of cupules, including, for example, at Tsodilo Hills in Botswana, and that cupule manufacture may represent a nascent attempt by people to give expression to their mental conceptualisation and physical experience of the lived-in places and unexplored spaces presented to them.

¹ Rock Art Department
National Museum
PO Box 266
Bloemfontein 9300 South Africa
e-mail: rockart@dragon.nasmus.co.za

² Australian Museum
6 College Street
Sydney
New South Wales 2000 Australia
e-mail: pault@amsg.austmus.gov.au
e-mail: richardf@amsg.austmus.gov.au

³ Aboriginal Areas Protection Authority
GPO Box 1890
Darwin
Northern Territory 0801 Australia
e-mail: ken.mulvaney@dwntii.aapa.gov.au

ACKNOWLEDGEMENTS

Research in Australia was made possible by a Visiting Fellowship from the Australian Museum. Biddy Simon and the Aboriginal community of Marralam are thanked for permission to undertake research in the land under their custodianship.

REFERENCES

- Flood, J. 1995. *Archaeology of the Dreamtime: the story of prehistoric Australia and its people*. Sydney: Angus & Robertson.
- Fullagar, R.L.K., Price, D.M. & Head, L. 1996. Early human occupation of northern Australia: archaeology and thermoluminescence dating of Jinmium rock-shelter, Northern Territory. *Antiquity* 70:751-753.
- Roberts, R.G., Jones, R. & Smith, M.A. 1990. Thermoluminescence dating of a 50,000 year old human occupation site in northern Australia. *Nature* 345:153-156.
- Taşon, P.S.C., Fullagar, R.K.L., Ouzman, S. & Mulvaney, K. 1997. Cupule engravings from Jinmium-Granilpi (Northern Australia) and beyond: exploration of a widespread and enigmatic class of rock markings. *Antiquity* 71: 942-965.



THERMOLUMINESCENCE DATING (TL)

TL dating works on the basis that materials with a crystalline structure such as ceramics, flint, or - as at Jinmium - quartz sand grains, contain small amounts of radioactive elements such as uranium, thorium and radioactive potassium. These decay at a known and steady rate, emitting radiation that bombards the crystalline structure. In the process electrons are displaced and then become trapped at points of imperfection in the crystal lattice. With the passage of time more and more electrons are trapped. If heated, the material releases the electrons in the form of light known as thermoluminescence - at the same time resetting the TL "clock" to zero. The firing of pottery resets the TL clock, as does the heat of a hearth when flint artefacts are burnt, or exposure of sand grains to sunlight before they are buried in an archaeological deposit.

If the thermoluminescence released from a heated sample can be measured, and background radioactivity of the deposit surrounding the sample accounted for, it is possible to arrive at a date. TL dating can be applied most usefully in situations where radiocarbon dating is not possible, for example where no suitable organic samples are available, or where a site is beyond the range of radiocarbon. However, besides the hazards of contamination, there are factors limiting its accuracy which is rarely better than ± 10 percent.

ARCHAEOLOGICAL SIGHTSEEING IN AFRICA

Manie Opperman

On 25 April 1997 my wife, Magda, and I left our home town, Fort Beaufort, in the Eastern Cape, on a tour of some 28 000 km that took us through Zimbabwe, Zambia, Tanzania, Kenya and Malawi. I was on sabbatical leave and planned to visit archaeologists at universities and museums in the different countries to see how they approach the teaching of archaeology and research. Secondly, I wanted to visit some of the famous archaeological and historical sites that I tell my students about every year without having ever been there myself. Also of interest to me were the general conditions in these countries and the lifestyles of the different peoples.

For transport we used a Toyota Hilux 4x4 with an off-road trailer and a rooftop tent. Mostly we travelled alone except to very remote areas when we tried to join up with other vehicles in order to reduce the possible risks of a breakdown. The road conditions varied from good to awful and at times placed severe demands on our vehicle. Reaching some archaeological sites proved to be major adventures in themselves, although the archaeologists working there, often from America or Europe, are used to local conditions and don't regard them as extraordinary. These researchers and their financial backing play a very important role in archaeological research in the countries we visited and their participation is therefore encouraged by local universities and museums.

Tourists are an important source of revenue in these countries. Our mode of travelling clearly showed that we were two middle-aged people on "safari" and we were invariably treated courteously at the different custom posts and at the many police and military checkpoints on the roads. Petty criminals and con men concentrating on tourists are, however, abundant - especially in the cities. We fortunately survived several robbery attempts before becoming sufficiently observant and vigilant to avoid such situations. More difficult to avoid however is the mosquito. Malaria is rife especially in the coastal areas of Tanzania and Kenya, and along Lake Malawi, and although we managed

to avoid catching the disease several people we met had contracted it despite using well known prophylactics.

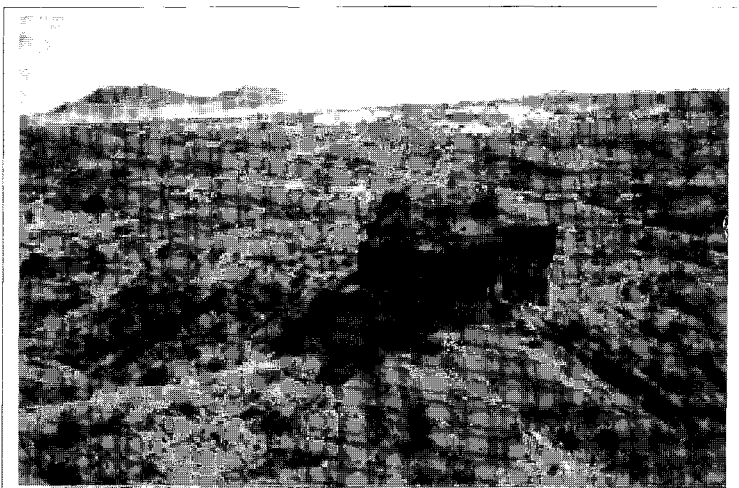
Zimbabwe, with its adequate infrastructure and national monuments which are well cared for, was a pleasure to visit. At the Zimbabwe ruin complex we spent two days taking videos and photos. The site is world famous and has been

the subject of study and explanation by prominent scholars linking it to the history of the Shona people. It looks well kept and according to E. Mutanga, the young curator of archaeology at the site, a continuous process of conservation is in place to preserve the buildings. The extent and influence of the Zimbabwe state was later

better appreciated after we had also visited Khami and Dhlo-Dhlo in south western Zimbabwe.

At the University of Zimbabwe in Harare we were briefed by Dr Gilbert Pwiti and Dr Robert Soper on the state of archaeological studies in Zimbabwe. The Iron Age is at present emphasised, with a great wealth of highly visible sites available for study.

On the way to the Nyanga area we visited Diana's Vow, a rock art site some 30 km from Rusape. It is a large panel partly destroyed by water seepage but even so the remainder is impressive with a large reclining human figure at the



The Olduvai

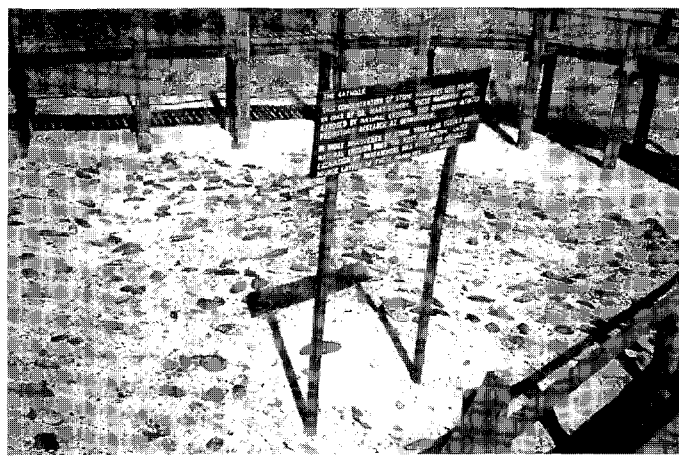
top and numerous smaller human figures shown as if engaged in life activities lower down.

At the Ziwa ruin site the enthusiastic curator, Joseph Chikumbirike, took us on a day-long tour of the terraced area which was the work of the Saunyama clan of the Shona. Of a later period than the Madzimbabwe, these structures served an agricultural purpose and are amazing feats of human social endeavour. Large sections of the ruin complex have been cleared



Tanzania is four-wheel drive country

of bush and grass and together with the small site museum afford an idea of the vastness of the complex and the lifestyle of its builders. After leaving Ziwa, we moved on to the Zambezi valley and drove through the Tonga rural lands to cross the border to Zambia at Victoria Falls. In Livingstone, Donald Chikumbi, Acting Director of the South Western region of the National Heritage Commission, painted a pessimistic view of the present state of archaeology in Zambia. Professional archaeologists are employed administratively and a serious lack of funds prevents fieldwork and conservation of known sites. A map published by the Commission in 1992 shows the localities of archaeological and historical sites. Following the road to the north through Lusaka towards the Tanzanian border we



Olorgesailie. A concentration of handaxes.

tried to locate some of the sites along the road. Mostly we were unsuccessful owing to a lack of signposting - or we may have missed the signposts as we concentrated on avoiding potholes in the road.

Kundalila Falls, a national monument north of Serenje, is a beautiful but lonely place with a Later Stone Age site close by. We camped at the site

with the caretaker, Manuel, also acting as watchman. Shortly after midnight, we were awoken by what sounded like a heated argument between Manuel and another person. Upon investigating I found him alone with no-one else in sight. He assured me that everything was under control because he had just won a confrontation with an evil spirit that wanted to kill him. This spirit had many other kindred spirits close by to assist him but they would not succeed for he was a Christian.

An extraordinary experience was a visit to Shiwa Ngandu close to Kapišhya hot springs in northern Zambia. Built by Steward Gore Brown in the 1920s, this is a replica of a vast English estate complete with a magnificent Tuscan manor house, other houses, school, clinic and post office. His descendants still own the manor house and utilize it as part of a safari package for tourists.

Crossing into Tanzania, the difference in population demography compared to that in Zambia was immediately visible. Small settlements occur every few kilometres along the highway to Dar-es-Salaam and it seems as if there are always people in sight wherever you stop or drive. The well-known Earlier Stone Age site

of Isimila is located 20 km south of Iringa. The caretaker, Celima, has worked on the site with various archaeological teams since the 1950s. He showed us vast quantities of Acheulean artefacts in association with fossilised bone, which are eroding from the sediments of a dried up lake. Erosion was also responsible for the formation of exquisite stone pillars some 18 m high close to the site.

The Archaeology Unit in the Department of History at the University of Dar-es-Salaam is very active in research but has few students. Dr F. Chami specializes in coastal archaeology and excavates on the island of Mafia, while Dr F. Masao works with an American team from the University of Rutgers under Prof Rob Blumenshine, in Olduvai Gorge. A visit to the latter was one of the highlights of our tour. Located in the Ngorongoro Conservation Area, the site has become world famous for its hominid remains and through the work of the Leakey family. It was an experience to stand at the spot, marked by a plaque, where Mary Leakey found the cranium of 'Zinjanthropus' back in 1959. Remains of other earlier excavations, now in a collapsed state, are still clearly visible. Visiting the site is quite expensive for South Africans, with an entrance fee to the Conservation Area of US\$45,00

per person plus an extra fee at the site. Tourist pressure is nevertheless very high, especially in the adjacent crater area.

While in Dar-es-Salaam, we drove to Kaole south of Bagamoyo, where the first of the Shirazi Arabs settled in the fourteenth century. The site covers an extensive area, a section of which has been cleared for visitors. At this site and also at other similar sites we visited, we encountered busloads of school children. They are shown around by guides and receive history lessons on the spot. Zanzibar, especially the old Stone Town, is living history - showing both eastern and western influences. Our guide, a young Muslim student, was most knowledgeable on the history and peoples of the island and his services were worth more than the fee he charged us.

Our stay in Tanzania was concluded with a memorable four-wheel drive trip to Lake Natron and the adjacent dormant volcano, Oldonyo

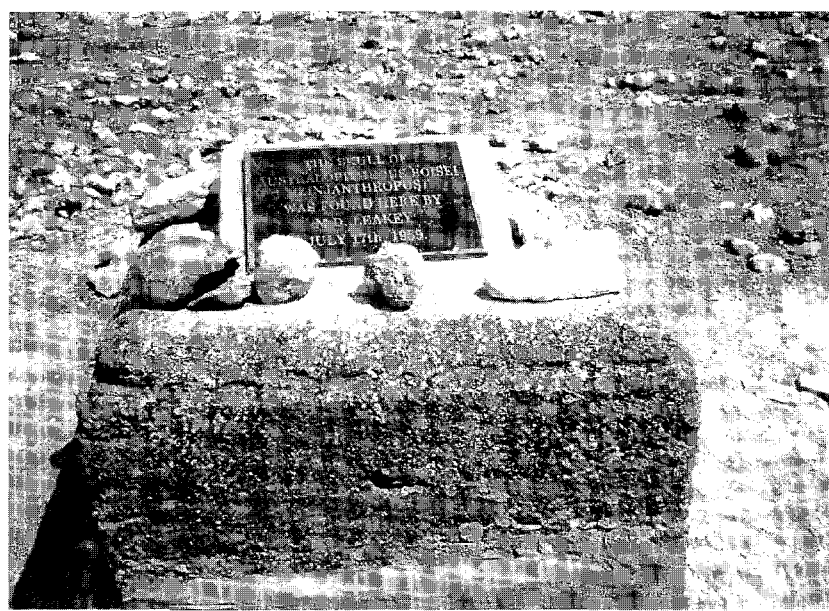
Lengai. The countryside is ruggedly beautiful. The Masai inhabitants retain their traditional lifestyle but are, nevertheless, now also part of a large consumer market based on tourism, requesting US dollars to pose for photographs and asking market-related prices for traditional artefacts.

Compared to Tanzania, Kenya appeared to be much more developed. Nairobi is a modern city and reminds me of South African cities. The traffic is, however, in a class of its own and peak

hour in Nairobi is a lesson learned. The driving techniques of drivers of busses, trucks and taxis often border on the suicidal. According to local opinion, having a new undented vehicle immediately marks you as a person who will give way - or one blessed with very quick

reflexes. We avoided night driving at all costs.

At the time of our visit the only archaeologists doing active research in Kenya were from or associated with the National Museum of Kenya and the British Institute in Eastern Africa. Unfortunately the universities were closed because of student unrest and the staff were not available. At Olorgesailie, on the way from Nairobi to Magadi, Dr. Richard Potts from the Smithsonian Institution and his team are studying palaeolandscape and hominid land use. An informative museum is on the site and guided tours are taken through areas of high archaeological visibility including trenches dug by earlier excavators. The largest concentration of handaxes and cleavers I have ever seen occur here, eroding from a hill slope. Michael Noll, a doctoral student, took us on an extensive tour of the site explaining past and present objectives. Bone preservation is good, an aspect which makes this site as important as Olduvai and



Olduvai: 'Zinjanthropus' discovering site.

Koobi Fora. The latter site is located east of lake Turkana in the Sibiloi National Park. The area is very remote and when we heard reports from the drivers of safari trucks, of sporadic tribal fighting on the way, as well as attacks on safari vehicles, we decided that it would be to risky to visit on our own. We did, however, drive up the western side of the lake to Eliya Springs, an abandoned holiday resort. The Turkana people of the area are very picturesque in their tribal dress but the effects of western material culture and tourism are becoming apparent. We were even offered pieces of fossilized bone for trade or money.

Mtwapa is the ruin of a fourteenth century Arab occupation on the East coast close to Mombasa. Prof Chapuruka Kusimba from the Museum of Natural History, Chicago and Benson Odeny-Obul from the National Museum of Kenya, with the assistance of a group of American students, were excavating the site. It is very extensive and will probably take years to excavate to the extent of the well known site of Gedi some 80 km to the north. After visiting all these Muslim sites I became more aware of the extent of Muslim penetration in East Africa and the effect it must have had on indigenous populations. Even more profound was the impact of European colonization. A monument to this period is Fort Jesus in Mombasa where Athman Omar, head of Coastal Archaeology, described to us the research done at the site. The influence of European civilization on the African countries we visited can be seen in the towns, schools and infrastructure. At Malindi, on the coast north of Mombasa, there are so many Italians that the locals speak fluent Italian. We met descendants of the first white Afrikaans-speaking settlers, who have survived the decolonization phase, and are today very prosperous especially in the farming sector. Kenya is a fascinating country where we would have liked to have extended our visit.

Returning from Kenya, we passed through Tsavo back into Tanzania. At Mount Kilimanjaro we met a group of South Africans who had just returned from a successful climb. The amazing thing was that most of them were past middle age - and while the eldest was 73, another had had a heart bypass operation just six months previously! It was an achievement to be proud of. Several climbers in a large team of British military personnel we met had failed to reach the summit.

The great north road from Arusha to Iringa is very rough but took us past the rock art sites at Kolo in the Kandoa district. The sites are worth seeing and have been fenced off, and there is a caretaker. Tall human figures are depicted mostly in red.

We were now on our way back to South Africa via Malawi, Zambia and Zimbabwe. At the Department of Antiquities in Lilongwe we were told that since 1993 no archaeological research had been done in Malawi due to a lack of funds. We were shown a map of a survey of Iron Age sites done in 1987. At the National History Museum in Bulawayo we visited T.S. Muringaniza, the senior curator, and also saw their current project, which is the reconstruction of Old Bulawayo, Lobengula's royal kraal. Assistance and advice on the project was given by the KwaZulu-Natal Monuments Council in South Africa. Our tour was concluded with visits to Khami, Dhlo-Dhlo and the Matobo National Park where we again saw how well Zimbabwe manages its national monuments, keeping them attractive for tourists.

On 14 September we crossed the border back into South Africa. Although it was good to be back we had greatly enjoyed the freedom of a camping lifestyle and the stimulus provided by the places and sites we had seen and the many friends we had made on the way.

The study of archaeology in South Africa today is far more intensive than anything I observed in the countries we visited. This fact was recognized by all the archaeologists we met, who expressed a desire for some form of co-operation with South African institutions, to assist with the development of their countries' vast archaeological potentials. Finance is a serious problem everywhere and getting tourists to pay when visiting sites is one way in which funds are generated. In South Africa we have many well-researched sites of importance as well as good archaeological visibility, and consideration ought to be given to following a similar approach. Prevention is better than cure and every effort possible must be made to save the study of archaeology from running down in our country as it has done elsewhere in Africa.

Dr H. Opperman
Department of African Studies
University of Fort Hare, Alice 5700.

Letter to the Editor

Water supplies in the desert

Dear Editor,

I refer to the note 'Bushman Water-hole?' in the April 1997 issue of *The Digging Stick*.

The following may be of interest.

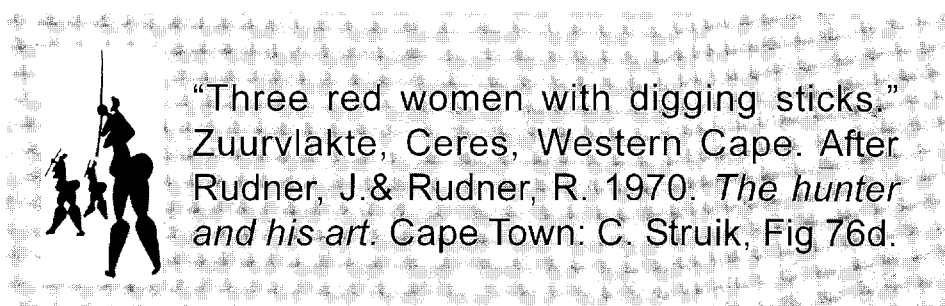
In 1947 when I was working in Namaqualand, I met a local farmer who showed me sources of water that were probably used by the Nama people for very many years. In that part of Namaqualand there are large whale-backed granite hills rising from the plains and called *nxous* by the farmers. Cutting down through these *nxous* there are narrow but deep clefts, and at the bottom of these clefts water from the winter rains collects. These supplies of water are sheltered from the sun and they last well into the dry summer months.

In 1949 in Botswana in the Kalahari about 50 km north of Werda on the Molapo River I observed the following. The site was a small hill of Griquatown series banded-ironstone rising above the Kalahari sand. At the hill we met a small party of Bushmen who had been working for some farmers in South Africa

along the Molapo and they were returning to their hunter-gatherer lifestyle in the Kalahari.

The Bushmen knew of a hole or cleft in the banded-ironstone, possibly about 2 m deep, that was filled with wind-blown sand. When we arrived they had dug out the top metre of dry sand down to the lower sand that was quite damp, probably as a result of rainwater seepage. One man was down in the hole and he had pushed a *suigriet* into the moist sand from which he was sucking up a meagre amount of water and then spitting it into an old two-gallon oil tin. As far as I could ascertain it had taken him about an hour to suck up about a gallon. We were able to give them 10 gallons of water from a drum we had on the truck and it was greatly appreciated. Later that evening they performed their gemsbok dance for us.

Dr G.T. Lamont
4 Lyon Street
Morningside
Somerset West
7130



The South African Archaeological Society was founded in 1945 to promote archaeology through education and publication. Bi-annually, the Society publishes the *South African Archaeological Bulletin* for publication of current archaeological research in southern Africa. Periodically, thematic collections of papers appear in the Society's Goodwin Series. *The Digging Stick* is the Society's general interest newsletter. Please contact the secretary (address below; tel 021-243330) for details of subscriptions and publications, including back numbers.

Editor: David Morris, P.O. Box 316, 8300 Kimberley, South Africa. Published by the South African Archaeological Society, P.O. Box 15700, 8018 Vlaeberg. Word-processed by David Morris and typeset by Annette Coetzee, courtesy of the McGregor Museum. Printed by Swiftprint, Kimberley.

E-mail: Society - archsoc@samuseum.co.za

Editor - dmmorris@museumsnc.co.za