THE DIGGING STICK

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UNDER THE CLOUDS OF WAR
The 2006 excavation season at Tell Dor, Israel

Willem Boshoff

'It was a most unusual excavation season at Tell Dor.' That is the short description of the 2006 season at Tell Dor, Israel.

Tell Dor, as seen from the beach at Hotel Nahsholim

As far as archaeology is concerned, it was a great season. However, off the tell it as a different story. The excavation season of six weeks was split into two halves. The first half was like carnival, dominated by the last weeks of the Soccer World Cup in Germany. Every evening the open-air bar showed the current game on a large screen and even those without an interest in soccer selected a team to cheer. The dust had only just settled after the Italy-France final and Zindane's infamous header when the mood, and everything else, changed in Israel.

The second half of the season was tense. An initial brief announcement that an Israeli border patrol was attacked by Hisbollah fighters on the northern border with Lebanon was only the beginning. Thereafter military events in Israel and Lebanon made headlines all over the world. Parents, friends and families of the South African and American participants in the dig were deeply concerned and the daily news updates did nothing to ease the tension. Missile attacks from southern Lebanon resulted in fierce counter-attacks by the Israeli army and air force on targets close to the border and deep into Lebanon. On a daily basis we witnessed the movement of low-flying military helicopters, while fighter planes thundered overhead on their northbound sorties.

The war touched the Tell Dor community more directly when one of the Israeli staff was called up for military duty, when one of the directors had to contact her family in Haifa on a regular basis to monitor its safety, and when some of the students from the University of Haifa, who joined the excavations on a daily basis, could not come to the tell because of travel restrictions.

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IN THIS ISSUE

The situation at Tell Dor

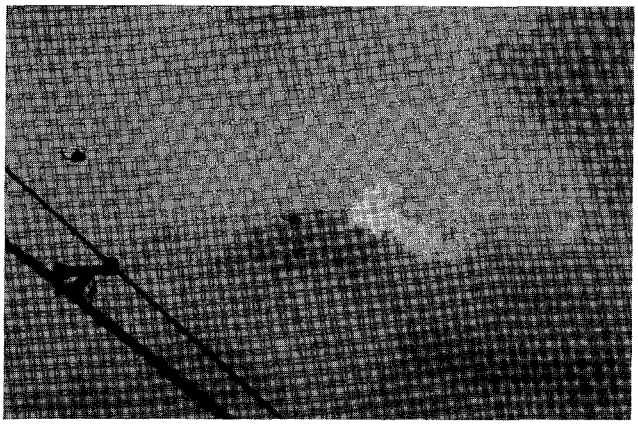
Even though the war was raging, excavations were fortunately able to continue. The archaeological site of Tell Dor is situated on the northern Carmel coast, about 40 km south of Haifa. In 'normal' years, when most of the troubles occur in the Gaza Region, the northern position of Tell Dor is a great plus for the excavation. You can just tell everyone: 'We are far north of the trouble – in fact we are quite close to Haifa.' This time there was no comfort in this geographical position, since the city that was being targeted was Haifa.

Fortunately Tell Dor lay beyond the range of the missiles mainly being used to attack Israeli targets. When hostilities broke out the safety situation was immediately evaluated by the excavation directors and the regional military command. A decision was taken that excavations would cease only when missiles or rockets were launched that could reach as far south as Tell Dor. This did eventually occur, but only on the last day of activities at the tell, after the volunteers had left. It resulted in the relocation to Jerusalem of the staff who were still on site.

The excavations were conducted with one ear on the news. Every night on CNN we could see what the rest of the world saw and we would then understand their concern. However, in many respects it was a normal excavation season. The infrastructure was in place for the full six-week season, staff had been recruited to guide the excavations and a large international contingent of volunteers had enrolled for the season, the vast majority of whom arrived. In another way it was a highly abnormal season. Everyone had to make a decision on whether to stay for the remaining three weeks of the season or to return home. Weekend travelling was restricted and continuous availability by cellphone was compulsory in case the security situation changed. The sound of war planes was our constant companion and reminded us that this was not a distant war!

The 2006 excavation season

Similar to any normal excavation season, the archaeology at Tell Dor in the 2006 season was fascinating. Remains on the tell represent practically every era of Syro-Palestinian history since 2 000 BC. The city of Dor was mentioned in ancient Egyptian sources, such as the Tale of Wen-Amun, and in the Bible, where it is named as one of the centres of King Solomon's twelve administrative districts (1 Kings 4:11).



Helicopters overhead, a constant feature of the excavations during the 2006 season at Tell Dor

Between 1980 and 2000 – 20 seasons in all – excavations at this site have been conducted under the direction of Ephraim Stern of the Hebrew University of Jerusalem. The new Tell Dor project is being led by two co-directors, Ilan Sharon of Hebrew University and Ayelet Gilboa of the University of Haifa. They have revised the research focus, but continue to work in the same areas as Stern. Concurrently they are responsible for the publication of completed excavations at Tell Dor.

During the 2006 season excavations were conducted in three areas in the southern section of Tell Dor, at D1 (Roman, Later and Earlier Hellenistic, Persian), D2 (Later Iron Age, Transitional Phase and Early Iron Age) and D5 (Hellenistic, Persian and Iron Age). Area D1 yielded impressive monumental architecture, D2 extensive outdoor living surfaces and refuse pits, and D5 varied architecture, heavily burnt buildings and an *in situ* massive container (pithos).

A large South African team participated in the excavations for the first half of the season and the excellent relationship South Africans have with the Tell Dor project was strengthened further. A scientific team from the Weizmann Institute, led by former South African Steve Weiner, set up a field laboratory and extended an open invitation to any South African scholar to link up with the institute for co-operative scientific research.

The South African participants worked in two areas. Area D2 was under the supervision of Elizabeth Bloch Smith. Two squares were excavated under my supervision with the assist-

ance of four South Africans and a few Americans. Area D5 was initially excavated by the rest of the South African contingent led by Coenie Scheepers of Unisa until they returned home. The excavations were supervised by staff and senior students of the Hebrew University.

Area D5, with its view over the bay, consisted of two very different sections. The one was a continuation of previous excavations that had already reached the Early Iron Age remains of Dor. In this season, remains of a heavily burnt built structure, a very huge pithos and a curious concentration of animal bones were found. The other section was new and its aim was to extend the excavations to the west where in Crusader times a moat was dug to separate their fortification on a peninsula from the mainland. In this section, Roman and Hellenistic objects were found, including complete lamps. In both sections large amounts of potsherds and various other small finds were excavated.

The 'Bucket Chain' ready for action

Two South Africans joined the excavations for the full six-week period. These were Floris Vermeulen, a retired advocate and then a Masters student in Biblical Archaeology at Unisa, and myself. Floris has since completed his Masters dissertation on the various ideas concerning a Sikil presence at Dor. We worked in an area of complicated outdoor deposits, refuse pits and a massive wall. Interesting finds from this area included a concentration of metal slag and a distinctive Persian pit dug into the older Iron Age remains.

The daily routine

At Tell Dor the excavations commence early in the morning, at around 5 a.m., or as soon as one is able to see what one is doing. At 7 a.m. there is a short coffee break and at 9 a.m a breakfast of remarkable variety and excellence is enjoyed at the Hotel Nahsholim, which is situated adjacent to the tell. As it is mid-summer, work ends at 1 p.m. with a light lunch at the glass house (museum). After that the afternoon is free until 5 p.m. and most people take a nap, do their washing or go for a swim in the inviting waters of the Mediterranean only a few hundred metres away.

The late afternoons are spent in the daily task of pottery washing. Twice a week sessions on pottery reading are conducted, which entail interpretation of recent finds by specialists. Other specialist meetings include regular stratigraphy sessions to establish the strata of the most recent excavations and to relate them to other areas. The weeks are also filled with further learning opportunities. There are practical field work sessions that focus on aspects such as surveys, site preservation and field drawings. Regular lectures were also presented by specialists on themes like marine archaeology, the archaeology of shell middens and the regional archaeology of the northern Carmel coast. These lectures proved to be highly informative and were attended by many more volunteers than only the few students who were enrolled for credits at their universities.

A remarkable aspect of the excavations in 2006 was the involvement of two specialist groups, namely the scientists of the Weizmann Institute and a group of students from the University of Haifa who specialised in site preservation. The Weizmann group established a laboratory on site, collected their own samples in collaboration with the area supervisors and analysed the samples on site before the season ended. The advantages are obvious and the results are very useful. One of the most dramatic finds, for example, was when it was established that the material that presumably made up a white crushed limestone floor actually consisted of phytoliths, the remains of a large amount of organic material such as grass. This insight changed the way in which some spaces were interpreted, e.g. a room with a good solid floor that had been considered as probably being indoors changed to a space that had been filled over a long period with cut grass and was most likely situated outdoors.

The Haifa group conducted site preservation on areas of the tell where excavations were concluded previously, primarily in a section where Roman buildings were situated. Structures were restored and experiments were conducted with different types of cement made according to ancient Roman procedures. In coming years we will be able to evaluate the work done on the conservation of the site, while the results will also be

relevant to conservation sites like Bet Shean and Caesarea.

In retrospect

I experience mixed feelings when I look back on the 2006 archaeological season at Tell Dor. On the one hand, the excavations were fascinating and as good as they get. Numerous friendships were renewed or established and research on Tell Dor was taken one step further. On the other, the fierce fighting in the north closed down excavations at sites like Tell Dan, Tell Kedesh and Tell Hazor, which dampened our enthusiasm. Northern Galilee, the normal venue for the mid-season long weekend, was out of bounds and day trips to Haifa or weekends to the Sea of Galilee were impossible in the second half of the season. The constant thundering presence of fighter jets was a stark reminder of the deadly and devastating military activity that was going on. Every night the news stories and visuals from Beirut, Tyre and Haifa would tell the story of never-ending fighting, which is the story of the Middle East. What was going on was in a sense just more of the conflict that had created the tells,

A Hellenistic lamp from Tell Dor

the hills of ruins found in Israel and neighbouring countries. Several times in history the fine harbour city of Dor was razed by enemies who felt the need to stamp their authority on the city and her inhabitants.

Prospects

During the northern summer of 2007 (June/July) a group from South Africa will once again join the excavations at Tell Dor. We hope to contribute once more to the process of unravelling the history of this great coastal city that was witness to so much history. Once again we will wish the walls could tell their stories.

Acknowledgement

The photos with this article were taken by Jonathan Andrews, *The Voyage of the Planet Magazine*.

STERKFONTEIN:
EARLY HOMINID SITE IN THE 'CRADLE OF HUMANKIND'
Amanda Esterhuysen

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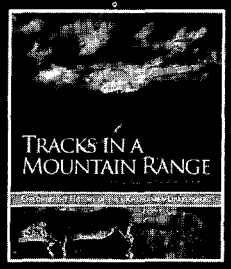

TRACKS IN A MOUNTAIN RANGE: EXPLORING THE HISTORY OF THE UKHAHLAMBA-DRAKENSBERG
John Wright and Aron Mazel

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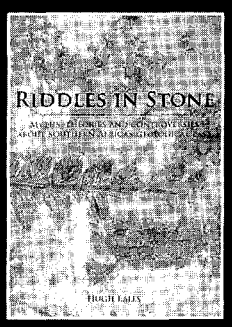

RIDDLES IN STONE:
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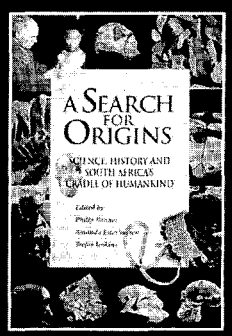

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MK1: A PAINTED RAIN-CONTROL SITE, WEPENER DISTRICT, FREE STATE

David Pearce

Sometimes archaeologists get lucky. This was certainly the case when colleagues and I followed up a report of a painted site in the Wepener District of the eastern Free State. The site has now become known as MK1. Although tiny, it is remarkable for both its exceptional preservation and the unusual imagery it contains. Indeed, it has imagery of types hitherto undocumented.

The painted panel is small, 1,3 m x 0,7 m in maximum dimensions (Fig. 1). It contains a jumble of apparently unrelated imagery. There is, however, an underlying conceptual unity that holds the panel together. The detailed relationship between paintings and their social significance has been explored elsewhere. In this article I examne a central theme in the panel by discussing some prominent images:

- ☐ Two quadrupeds of indeterminate species (and remains of a third)
- ☐ An antelope-like image
- ☐ Several eland antelope
- ☐ 'Fragments of eland'
- ☐ 'Aquatic' images

Rain-animals and rain-controllers

Unlike the overwhelming majority of San zoomorphic images, the two examples in the upper part of the panel depict creatures of no identifiable species. The larger has white dots on its head, neck, body and hindquarters. A third has been almost entirely destroyed by a clay swallows' nest; only its forelegs remain and these are also covered in white dots. A fourth example, slightly lower and to the right, looks rather different; at first one could take it to represent an antelope with its legs tucked beneath it, but closer inspection reveals non-realistic features. It resembles an eland antelope, yet also has rows of tiny white dots on its head, neck, body and hindquarters.

Despite the deliberate blurring and mixing of species and the incorporation of non-realistic elements, such images are among the best-understood components of San rock art. Whilst one cannot rule for all non-literal zoomorphic images, those of the kind in MK1 are what the 19th century /Xam San called *!khwa-ka xoro*. This identification applies to both the chunky quadrupeds

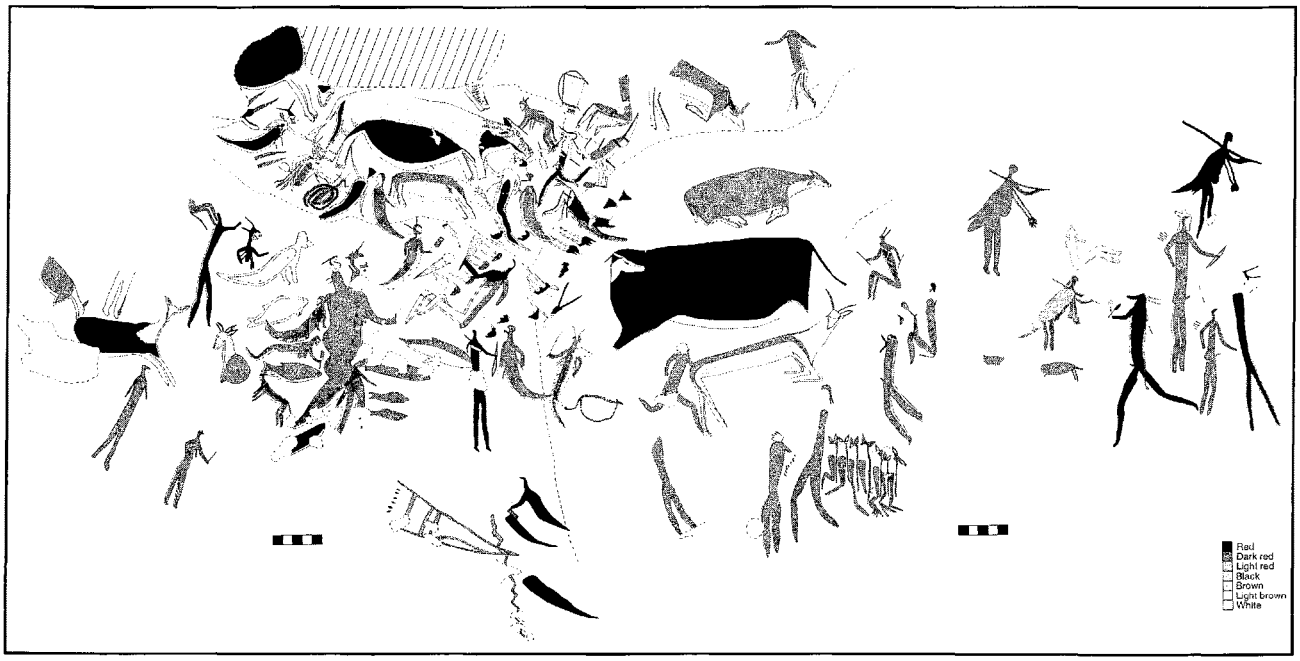

Fig. 1: The main panel at MK1 contains numerous, finely detailed depictions, but is dominated by elongated part-human figures

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and the antelope-like one. Translated, the description means 'animal of the rain/water'. The /Xam named kinds of rain and cloud after parts of an animal: columns of falling rain were called the rain's legs, while wisps of cloud were known as the rain's hair. Mist was said to be the rain's breath. Closely associated with the *!khwaka xoro* were *!khwa-ka !gi:ten* (sing. *!gi:xa*) – shamans of the rain.

As is now fairly well known, southern San rain-shamans said that they captured a rain-animal at night in a deep pool, led it across the countryside to the place where rain was needed, or to the top of a nearby hill, and then killed it so that its blood and milk fell as rain. In the MK1 panel, the anthropomorphic figure at the head of the largest rain-animal probably represents a rain-shaman who is attempting to control the creature.

Eland

Next, I turn to the depictions of eland (*Taurotragus oryx*). The red body of the central image is clearly visible; its lowered head with a tuft of red hair on its forehead and horns can also be discerned. The image appears to have a second head, painted to give the impression that it is looking over its shoulder. Although this part of the panel is not as well-preserved as the rest, it seems that a painter renewed the image by adding a second head after the first had faded. The white paint that was generally used to depict the belly, neck and lower legs of eland has faded; white pigment is more fugitive than red. The fact that the white parts of this image have almost disappeared while those of other paintings in the panel are well preserved suggests that this eland was one of the first images to be made at MK1. In addition to the prominent central painting, there are the remains of five other eland images.

Both 19th and 20th century San ethnography shows that the eland was a key symbol with multiple associations. It featured in girls' puberty rituals, boys' first-kill observances, marriage rites and numerous myths. It was believed to be the trickster-deity's favourite creature and to possess more potency than any other animal. As such, its potency was (and still is) greatly desired by San shamans. The MK1 paintings of eland were therefore embodiments of the potency on which much else in the panel depended. The eland was an important medium, a conductor of potency, through which a shaman could establish contact with the spirit world.

There is, however, another component of the eland's symbolism that needs to be considered. In a /Xam myth hunters kill what they believe to be an eland, but '[a]t that time the Rain was like an eland'. An eland may thus itself be a rain-animal, even though it has no unusual features. Because this MK1 eland was likely painted before the rain-animals in the upper part of the panel it was probably originally an embodiment of potency that shamans (of whatever speciality) could harness – as most eland images seem to be. Subsequently, after the rain-animals and other images had been added to the panel, the rain segment of the eland's symbolism may have been highlighted. In this way, painters manipulated the significance of already-existing images.

Fragments of eland

In addition to recognisable depictions of eland, there are 16 images, some only partially preserved, of a kind not previously noted. They appear to depict the top parts of elands' heads with (fully visible in well preserved instances) that species' pair of distinctive straight horns and tuft of red forehead hair (cf. the lowered head of the large eland and the remains of an eland image to the left of the rain-animals). There is also an isolated pair of eland horns in the upper left of the panel. This pair and others are painted in black, but some are depicted in white.

A focus on a particular part of an eland, as we have at MK1, is a feature of San rock art. Often the dewlap is exaggerated to imply the presence of much fat and hence potency. I do not, however, know of any other depictions of isolated eland horns and forehead hair. Why would the MK1 artists paint such images?

A newspaper report from 1851 claimed that cattle-rustling San, fleeing from the animals' Zulu owners 'summoned a torrential downpour of rain by blowing a blast on an eland horn'. This colonial report may not be as fanciful as it at first seems because the San did indeed associate horns with rain. A number of ethnographic accounts describe San blowing on horns or burning them to either create rain or disperse it. I therefore suggest that the depictions of eland horns in a rain-control panel was probably implicated in rites, either to bring rain or to disperse a dangerous thunderstorm.

Aquatic images

We come now to the second kind of idiosyncratic

element in the MK1 panel. These are 16 (including three poorly preserved examples in the lower part of the panel) elongated, slug-like figures with human torsos, arms and heads. Several of them hold out 'sticks' or 'paddles' towards the rain-animals. What especially characterises them as a group, however, is their tapering 'tails'. Most (certainly the better preserved examples) have a white outline surrounding the tails. Three also have narrow black lines cutting across the white outline, sometimes extending beyond the border of the tail. One figure also has paired white protuberances around the mouth (as do the coiled snake and a legless anthropomorphic figure). Others have one protuberance. A more consistent feature is red lines drawn across the face; at least nine have them.

These tapering figures are clearly a conflation of human images and some other creature. They have several features that suggest that the non-human part of the conflation is something aquatic. Indeed, they may simply be meant to represent a generalised aquatic creature. On the other hand, the standardisation of the depictions suggests that they may be modelled on a particular species. Researchers should attempt to identify that species, even if certainty cannot be achieved.

The depictions of fish with which they are associated are little help. No two are alike. This vagueness may be accidental; we may simply be looking for the 'wrong' identifying characteristics. There is also the possibility that the fish, like rain-animals, are a deliberate blend of a number of highly generalised species. If this is so they (like the rain-animals) may not be 'real', but rather spirit-world creatures encountered by rain-shamans.

There are two principal possibilities as to the creature that the tapering bodies suggest. A fish that in some ways resembles the depictions is the common barbel (*Clarias gariepinus*), a species abundant in the river adjacent to MK1 (Fig. 2). They are in some respects formally similar to the painted figures:

- ☐ They have elongated, tapering bodies.
- ☐ The dorsal and anal fins do not join the caudal fin, but they are long and end just short of the caudal fin.
- ☐ They have fleshy 'barbels' round their mouths, similar to the white protuberances around the mouths of the conflated and other figures.

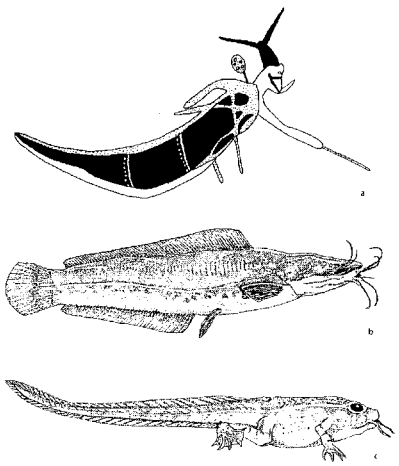

Fig. 2: A comparison between (a) one of the elongated human figures and (b) a barbel and (c) a tadpole shows morphological similarities

In addition to the morphological similarity of the barbel to the depictions, the species has an ability that may have suggested a relationship with rain-animals. Besides gills, it has an accessory breathing organ in the back of its head that enables it to move over land after rain or when the grass is wet with dew. Just as the rain-animal comes out of the water hole, so these atypical fish leave the water, and they do so at the same time as the rain-animal was believed to leave its pool – when it is raining.

A second possibility is that the depictions are not ichthyoid at all, but rather allude to another aquatic creature – the tadpole and, by implication, frogs (Fig. 2). Tadpoles have elongated tapering bodies, continuous fin-like structures around their tails and, at some stages of development, fleshy pulps around the mouth. They therefore have some of the characteristics of the conflated figures. They eventually metamorphose from fish-like aquatic larvae to more terrestrial adult frogs, in the process growing legs (not unlike the arms of the painted figures) and losing their tails. It is therefore significant that the images at MK1 have tadpole-like tails and bodies with arms where, at the transitional stage, a tadpole grows legs.

The location of tadpoles' transformation is also of importance. Water and waterholes were places where San shamans often began their trans-cosmological journeys and where their transformations began. *!Khwa* means both water and rain, a mediating substance that wells up in waterholes *and* falls from the sky. Waterholes were a central node of San cosmology. Given its transformative power, it is not surprising to find that *!khwa* had a dangerous aspect. According to a number of ethnographic accounts, if people offended the rain in some way, it turned them into frogs. Equally, if one were to kill frogs, one might

cause drought. Frogs and aquatic tadpoles were thus powerfully linked to rain and transformation. I therefore argue that, whilst barbel are possible referents, the tapering humanoid figures at MK1 more probably refer to rain-shamans transformed by *!khwa* into partial tadpoles. At the same time, I acknowledge that their form may be a more general reference to subaquatic life.

Importantly, I note that nine of the figures have red lines on their faces, a feature frequently found on depictions of shamans. These lines represent the nasal bleeding induced by San in altered states of consciousness. Associated as they are with fish, the figures are therefore probably engaged in subaquatic shamanistic activities related to the capture of the rain-animals around which a number of them are ranged.

Acknowledgements

This article is a summary of a lecture presented at the 2006 Annual School of the Trans-Vaal Branch of the South African Archaeological Society. I thank the editor for requesting it. I also thank colleagues who read drafts, and especially David Lewis-Williams with whom I undertook the original research.

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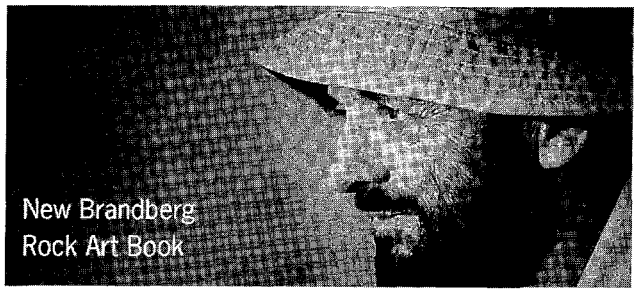

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Applications should be forwarded to the Secretary, Trans-Vaal Branch, South African Archaeological Society, PO Box 41050, Craighall, 2024, or by e-mail to secretary@archaeology.org.za. Enquiries: Marilee Wood, mwood@mweb.co.za, tel. 011 788 3767.

EXCAVATIONS AT FOUR SITES NEAR JAKKALSBERG IN THE RICHTERSVELD

A preliminary report by Jayson Orton

In 2001 the Archaeology Contracts Office of the University of Cape Town excavated four Later Stone Age (LSA) sites on the southern bank of the Orange River (approximately 28° 10' 53" S 16° 53' 10" E) near the small settlement of Sendelingsdrif and just east of Jakkalsberg (Figs 1 & 2)(Halkett 2001). A paper on two of these sites is currently in preparation for the *South African Archaeological Bulletin,* while this article serves as a preliminary report broadly discussing the content and significance of all four. Two sites have already been radiocarbon dated and a further series of dates is due to be run in the near future with the financial support of the Trans-Vaal Branch of the SA Archaeological Society and the Society's Kent Bequest.

Neither Jakkalsberg K (JKB K) nor JKB M has been dated, but both contain pottery indicating an age of less than 2000 years. The other two sites, JKB L and JKB N, are far older at about 1500 BC and 2900 BC respectively (Table 1).

The Jakkalsberg K site

JKB K is a small site that was partly disturbed prior to excavation, but which still yielded some *in situ* deposits. Like JKB A and B to the northeast, this site lies among a belt of trees flanking the river (Fig. 2). The trees would have provided much-needed shade to both the people and any domestic stock kept there. The site had one hearth and a good collection of animal bones, the majority of which were identified to be small to medium bovids. This is the size class to which sheep belong, but no sheep bones could be definitively recognised. The bones of small bovids, an equid, rock hyrax and many fish were also present. Many ostrich eggshell (OES) fragments and two refitting fragments of a flask mouth were found along with some fragments of shell from another type of bird. Four marine *Bullia digitalis* shells and a few fragments of the freshwater shell, *Corbicula fluminalis*, were also discovered.

A good lithic assemblage comprised mostly of quartz and quartzite was found. There were no retouched pieces. The beads range in diameter from 4,0 mm to 8,9 mm with a mean of 6,15 mm. The pottery assemblage shows several pots of different sizes, rims of different types and even a drilled hole of the type sometimes made to assist in the repairing of a broken pot.

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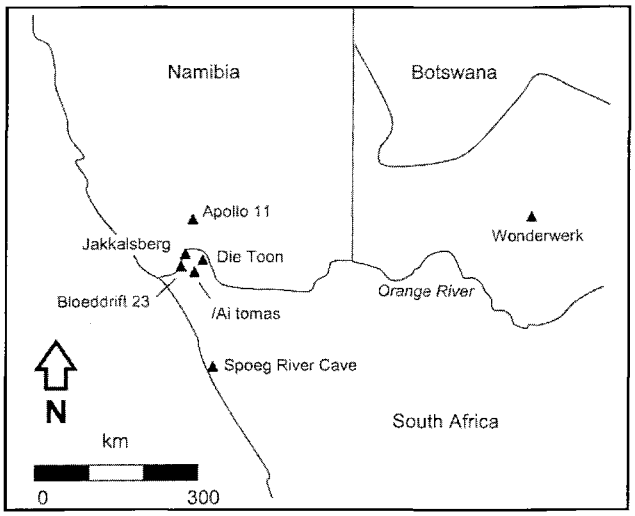

Fig 1: The location of sites in the Jakkalsberg area. The six Jakkalsberg sites are indicated by a single triangle and are detailed in Fig 2.

Table 1: Radiocarbon dates for JKB N and JKB L

Site	Radiocarbon date	Lab. No.	Calibrated age
JKB L	3330 ± 70 BP	Gx-32065	1643 (1 528) 1491 BC
JKB N	4500 ± 50 BP	Pta-8496	2912 (2 896) 2882 BC*

* Corrected for the apparent age of ostrich eggshells (-180 years) following Vogel *et al.* (2001)

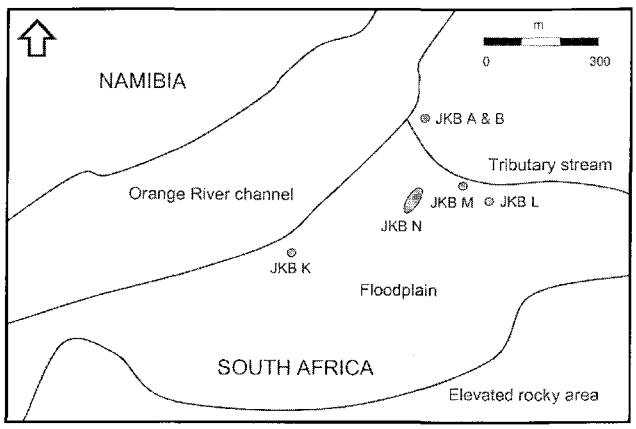

Fig 2: The locations of the Jakkalsberg sites on the Orange River floodplain

Site JKB M

This site, located in a hollow between mounds of silt some 200 m from the Orange River (Fig. 2), was somewhat deflated but the spatial patterning was still preserved. A few sheep bones were positively identified and the remains of small bovid, hare, caracal, springbok, snake and micromammal were also present. Surprisingly, there were no fish bones. Many OES fragments, including two refitting flask-mouth fragments, other bird shells and fragments of freshwater shells including *C. fluminalis* and possibly *Unio caffer* were also recovered.

The small-flaked stone artefact assemblage consists mostly of quartz. No formal tools were found. The beads range from 3,6 to 7,0 mm in diameter with a mean of 4,9 mm. Bead manufacturing debris indicates on-site bead production. While whole beads were scattered over the entire site, production debris was concentrated in one area. A large pottery collection includes lugs, bosses and decorated rims and it seems likely that at least four pots are represented. The decoration consists of horizontal lines just below the neck.

Site JKB L

JKB L lies in a deflation between mounds of silt some 250 m from the river (Fig. 2). Spatial patterning of finds around the site was well preserved. Particular finds were found clustered in certain areas and a hearth was visible. The small faunal assemblage contained small and small to medium bovid, rock hyrax, micromammal, snake and fish. A few fragments of marine (*Cymbula granatina* and *Scutellastra granularis*) and freshwater shellfish (*C. fluminalis* and *U. caffer*) were also present.

The site contained many beads, which indicates an extensive bead manufacturing industry, and a number of engraved OES fragments. The beads are between 2,5 and 6,5 mm in diameter, with a mean of 4,54 mm. Engraving on one bead indicates the recycling of OES. The engravings include parallel lines and cross-hatching, both of which are common motifs (Fig. 3). One fragment has a heavily scratched surface. Of the two flask-mouth fragments found, one was engraved. A small, broken bone point was also recovered.

A typical Holocene microlithic stone assemblage was present. Most artefacts are of quartz and much of the remainder are of cryptocrystalline

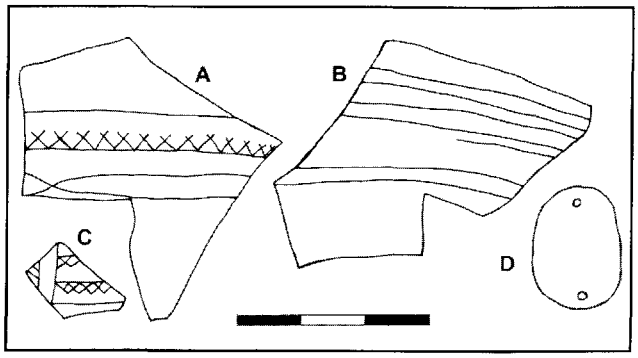

Fig 3: Decorated OES fragments from JKB L (A – C) and an ostrich eggshell pendant (D) from JKB N. Items A and B are composed of six and two refitting fragments respectively.

silica (CCS). Cores were rare, but irregular cores dominated the sample. Among the formal tools, backed tools strongly outnumber scrapers. The former included several quartz triangles, a tool type not previously encountered in South Africa but present in Namibia, Zimbabwe and elsewhere to the north. Tools with curve-backed margins are rare in South Africa, but seven examples in both quartz and CCS were found at JKB L. One CCS denticulate was also present. Numerically, triangles and backed scrapers were the most significant. A small double-grooved stone was found that may have been used in the production of beads since its groove is 4–5 mm in diameter. A selection of the most significant tool types from this site and JKB N is shown in Fig. 4.

Site JKB N

JKB N is a large, heavily deflated site in the middle of the Orange River floodplain (Fig. 2). No spatial patterning has been preserved. The presence of classic mid-Holocene tools, pottery and historical artefacts indicates that material from at least three distinct periods has become incorporated in the deposit. Faunal material, including bovids, tortoises, micromammals, snakes and fish, is very poorly preserved and was thus not analysed. Marine shell fragments from species such as *C. granatina*, *S. granularis*, *Scutellastra argenvillei*, *Donax serra* and *Choromytilus meridionalis* were remarkably common. Rare fragments of freshwater shells *C. fluminalis* and *U. caffer* were also found. Unmodified OES fragments were ubiquitous across the site.

Bead manufacturing debris and many whole beads ranging between 2,8 mm and 6,5 mm in diameter (mean size is 4,1 mm) were present. Only four beads found are larger than 5,0 mm

and these may relate to more recent occupations. Compared with JKB L, engraved OES fragments were more numerous relative to beads and bead debris, but the engraved motifs are similar. Two bone beads were found. They are similar in shape to normal OES beads, but one is very large, measuring 11,85 mm in diameter. The second one is just 4,24 mm across. Several flask mouth fragments were found from across the site, along with two small circular OES 'flakes', which might have resulted from someone carefully punching a hole in the top of an ostrich egg. A whole OES pendant and a fragment of one were also found. The whole one is an oval shape with a small hole pierced at either end (Fig. 3). Unlike many other South African examples, the pendant is undecorated.

Some 44 000 flaked artefacts were recovered from the ~ 350 m^2 excavation. Although quartz dominates strongly, CCS is more common here than at JKB L. There is also a far greater quartzite component and this is almost certainly the result of the inclusion of more recent material since many of the quartzite flakes are substantially larger than those in other materials. Irregular cores were most common, although bipolar and single platform cores also occurred in numbers. There were 501 formal tools in the assemblage, with scrapers slightly outnumbering backed tools. Side scrapers were particularly dominant, with backed scrapers being the second most numerous type. Other scraper forms were surprisingly rare. By contrast, a large variety of backed tools were present, with none being particularly dominant.

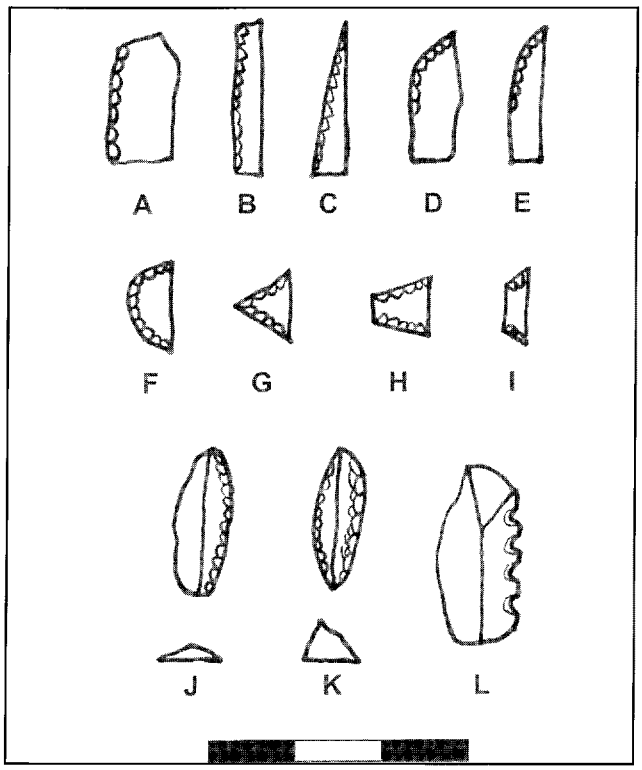

Fig 4: The 12 most significant formal tool types found at JKB L and JKB N. The drawings are stylised to emphasise their primary characteristics and are approximately to scale. The two scrapers (J and K) have their cross-sections indicated as well. Note that on K the backed margin is the steepest (left) one. A: backed flake; B: backed bladelet; C: backed point; D: curve-backed flake; E: curve-backed bladelet; F: segment; G: triangle; H: tranchet; I: trapezium; J: side scraper; K: backed scraper; L: denticulate.

The most significant classes in terms of numbers were backed flakes, backed bladelets and segments, which were all fairly equally represented. One quartz and one CCS triangle and one CCS trapezium were also present. The most remarkable feature of this assemblage was the presence of 24 denticulates, almost all of which were made on CCS, but with one example on quartz (Orton & Halkett 2001). Similar types of artefacts are rare in South African sites and never as strongly patterned as is the case at JKB N. Because of the many scrapers present, it seems likely that some mixture of materials dating between 5000 and 2000 BP has occurred on the site. Given the date already obtained, a smaller proportion of scrapers would have been expected. Further dating will help to clarify this. Four small grooved stones were found on JKB N.

Although the majority of finds from JKB N are clearly greater than 2000 years old, there is also material dating to within the last two millennia. The larger quartzite and quartz flakes undoubtedly belong to a late occupation, probably the same occupation from which the fragments of pottery originated. Historical material seems to be no older than the 19th century and the single iron artefact, a small spatulate item, is on the basis of its technique of manufacture more likely to be European than indigenous in origin.

Discussion and conclusion

The Jakkalsberg sites contain material of vastly different age and represent several periods of occupation spanning the last 5000 years. JKB K and JKB M will contribute to the already extant body of knowledge on prehistoric herders of the Richtersveld, but the older JKB L and JKB N sites carry far greater significance as they have produced flaked stone artefacts not yet seen in South Africa.

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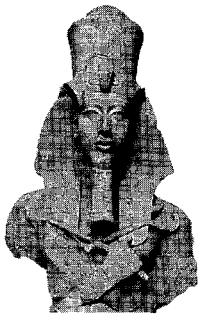

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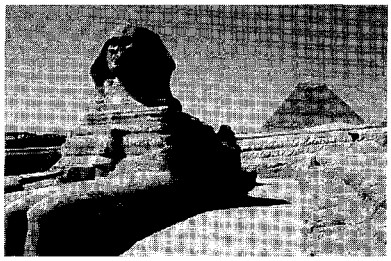

The artefacts of the latter sites demonstrate stronger affinities with stone tool assemblages from sites north of the Zambezi River than with assemblages to the south thereof. South of the Zambezi the LSA developed differently to that of the rest of Africa. The four main industrial complexes represented in the south are the late Pleistocene microlithic (19 000 to 9500 BP), the terminal Pleistocene/early Holocene non-microlithic (12 000 to 7000 BP), the Holocene microlithic (post-8000 BP) and the late Holocene assemblages (variable but all post-4500 BP). The first three fall during periods commonly known as the Robberg, Oakhurst and Wilton, while the final one shows far less coherence and serves only to catch all those assemblages not typical of the Holocene microlithic. In terms of our discussion, the key element to this succession is the existence of a non-microlithic period in the middle. In the rest of Africa north of the Zambezi River a single microlithic industry occurred continuously throughout the LSA (Mitchell 2002; Sampson 1974).

JKB L and JKB N with their many finely crafted stone tools thus fall within the southern African Holocene microlithic, yet contain elements of assemblages from further north. In order for this to have happened some degree of continuity had to have occurred without the interruption of the non-microlithic period. This could have taken the form of a mid-Holocene influx of people and/or knowledge, or there could have been a region south of the Zambezi that did not experience those factors responsible for the triggering of the non-microlithic period. It is impossible to tell which theory might be correct, especially given that so few areas of the Northern Cape and Namibia are well understood archaeologically. The nearest definitive evidence for the presence of the non-microlithic period comes from Wonderwerk Cave in the Northern Cape interior, although it may also be present at Spoeg River Cave in Namaqualand (Fig. 1) (Humphreys & Thackeray 1983; Webley 2002).

Insufficient data are present from Namibia to give a reliable indication of whether this period was present there or not, but Wendt (1972: 21) describes 'a surprisingly poor stone industry' containing 'a number of medium-sized scrapers and scraper-like tools' from Apollo 11 Cave, some 100 km northeast of Jakkalsberg (Fig. 1). The upper part of the layer containing this assemblage is associated with dates of between 14 350 and 10 100 BP, which may represent the non-microlithic period. This is not yet confirmed, however.

The triangles and related types are particularly important as these artefacts are frequently encountered in sites throughout Africa, but have never been reported within South Africa. Occasional artefacts that look similar to triangles are far more likely to be malformed segments and are very rarely seen. Other types, including denticulates and curve-backed flakes and bladelets, are also more commonly encountered further north.

In Namibia triangles occur more recently than at Jakkalsberg (e.g. Richter 1984), further supporting lithic continuity in the western part of the subcontinent. It is thus possible that the more arid, northwestern areas of the subcontinent maintained the tradition present to the north, while those areas to the south and east experienced change leading into and out of the non-microlithic period. Future archaeological research in the northwestern parts of the subcontinent should attempt to clarify this issue.

Acknowledgements

Richard Klein, Teresa Steele, Simon Hall, Jenny Day and Shadreck Chirikure assisted in the identification of various components of the assemblages and their help is gratefully acknowledged. Transhex Mining Ltd funded the excavations.

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A RESPONSE

SIGNS OF THE OLDEST HUMAN RITUAL IN BOTSWANA?

Nick Walker & Sheila Coulson

In your latest issue an article was published on Rhino Cave, Tsodilo Hills, entitled 'Signs of oldest human ritual in Botswana?' This article was written without the knowledge of the two archaeologists presently conducting research at the site, Nick Walker and Sheila Coulson[*].We wish to take this opportunity to correct the history of research at this site.

In the article it states that Sheila Coulson discovered the site. In fact, the site was discovered in 1994 during an audit of the rock art of Tsodilo initiated by the National Museum of Botswana as part of its programme to introduce better management at the site and to support the initiative to have Tsodilo Hills listed as a World Heritage Site. In the next few years a team led by Larry Robbins and Alec Campbell began the preliminary research that established that Rhino Cave was used by people during the Middle Stone Age (MSA). In 1997, Nick Walker began a study of the rock carvings of Tsodilo. It was noted that the Rhino Cave carvings comprise two types, called ovoids and stringers, and that they are unique to this site at Tsodilo. Whilst recording the Rhino Cave carvings in the company of Jerry Collins-Hooper and 'KG' Nkage, several unusual features about the site were noted, including the hidden alcove behind the snake-like rock with the carvings. Collectively, these suggested that the site may have been used for ritual purposes. On the basis of Robbins' and Campbell's work there was a good possibility that they dated back to the MSA.

It was to test this idea and establish the age of the carvings that Nick Walker began excavation here in 2003. He was joined by Sheila Coulson in the 2004 field season when excavation confirmed the MSA age of the carvings at both of these sites. Three articles written by Nick Walker on the preliminary phases of the study are currently in press. Analysis of the excavated material and further work on the cave continued in the 2005 and 2006 field seasons under Coulson's direction. A comprehensive paper on the results, where evidence from the MSA layer strongly supports ritual behaviour during this early period, is presently under preparation by Coulson and Walker.

* The article was a combination of two news reports, one by *Reuters* and the other by *National Geographic News* – Editor.

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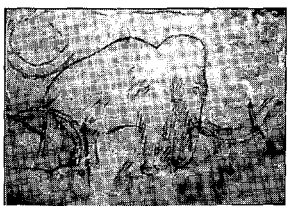

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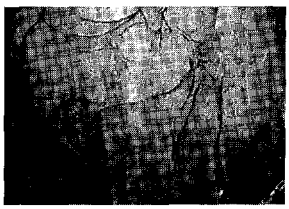

A BEGINNER'S GUIDE TO ARCHAEOLOGY, SAHRA AND THE PHRAs

Janette Deacon

Like many institutions in South Africa since the change in government in 1994, the National Monuments Council (NMC) has been transformed into an organisation that better meets the principles and basic tenets of our new Constitution. The NMC was replaced by the South African Heritage Resources Agency (SAHRA) when the National Heritage Resources Act (Act 25 of 1999), or NHRA, was written in response to the findings of the Arts and Culture Task Group (ACTAG) that met in 1994 to assess the needs of arts, culture and heritage in the country. The new legislation replaced the National Monuments Act (Act 28 of 1969) and came into effect on 1 April 2000.

At the heart of the NHRA is an integrated system that allows decision-making about the significance of heritage places to take place at the lowest competent level of governance. In other words, it is a bottom-up approach rather than the top-down one that was previously in place. The advantage of this system is that, in theory at least, it will allow local authorities to identify sites of importance to their residents and this will lead to better integration of the management of heritage places in town and regional planning.

Another important change is that the NHRA is concerned with a wider range of heritage resources than was in the National Monuments Act. The term 'heritage resources' includes not only places of heritage significance, but also the oral histories attached to them, the landscapes in which they are situated and the associated heritage objects that define South Africa's multicultural history. As stated in the preamble, the Act 'has the potential to affirm our diverse cultures, and in so doing shape our national character.'

SAHRA and PHRAs

The SAHRA national office is situated in Cape Town and there are regional offices in each province. Their responsibilities are, amongst others, to:

- ☐ establish national principles, policies and standards;
- ☐ promote and encourage public understanding of heritage resources;
- ☐ manage national heritage sites and heritage objects;
- ☐ manage permits for export of heritage objects;
- ☐ manage shipwrecks and maritime archaeological sites;
- ☐ issue permits for archaeology and palae- ontology on behalf of provinces that do not employ archaeologists or palaeontologists;
- ☐ manage the National Heritage Resources Fund; and
- ☐ develop and maintain an inventory of the national estate.

In addition, the NHRA requires each province to establish a provincial heritage resources authority, colloquially known as a PHRA. The PHRAs are responsible for the identification, conservation and management of all provincial and heritage sites, and places that have general protection in terms of the Act. These include all former national monuments that automatically became provincial heritage sites when the NHRA came into effect, and all archaeological and palaeontological sites. PHRAs have the power to devolve decision-making about local heritage sites to local authorities, but so far no local authorities have taken over this responsibility because it requires dedicated posts and expertise.

As SAHRA is a national body, it receives its funding from the national Department of Arts and Culture but appoints its own staff. Policy is set by a Council that consists of up to 14 members. Five members are appointed by the Minister of Arts and Culture every three years from public nominations. The other nine members are the chairpersons of the PHRA Councils appointed from public nominations by the nine provincial Ministers responsible for Arts and Culture. The most recent SAHRA Council assumed office on 1 April 2007. The Council appoints the chief executive officer (CEO) on a five-year contract, and the CEO is the accounting authority in terms of the Public Finance Management Act.

At the time of writing, PHRAs were legally established in all provinces, but were not yet operating effectively in the Eastern Cape, Northern Cape, North West and Limpopo provinces. The most effective PHRA is Amafa aKwaZulu-Natali, which was established even before the NHRA came into force because it took over the budget and staff of the former KwaZulu Monuments Council. Currently it receives its funding through the office of the provincial premier and employs a staff of nearly 100.

In the case of all other PHRAs, the Councils are appointed for three years by the MECs for Arts and Culture, but the staff members are appointed by the provincial Department of Arts and Culture. The budgets for the Councils vary and in some cases are too low to allow for regular meetings to be held. They have been able to fulfil their mandate only in provinces

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where Council members with a good understanding of the NHRA have been appointed and have been able to make a positive input. As far as archaeology and palaeontology are concerned, only Amafa and Heritage Western Cape employ professional archaeologists. Permits for all other provinces are therefore handled on an agency basis by the SAHRA head office.

The management of heritage resources

The NHRA is structured around a widely accepted three-stage process for the conservation and management of heritage resources, as follows:

1. Identification of heritage resources that fit the criteria set out in the NHRA and consultation with all interested and affected persons and organisations to consider their value
2. Assessment of the level of significance of the heritage places that have been identified (called grading)
3. Assignment of an appropriate management strategy to retain the significance of the heritage resource

The identification and consultation stage is best done at local authority level. Once a municipality has done a survey, or contracted an expert to conduct one on their behalf, they can refer to guidelines developed by SAHRA and PHRAs that set out the criteria to be used in grading significance. The grading used is as follows:

- ☐ Grade III places are of local significance and would be listed on a heritage register maintained by the local authority and PHRA. Anyone wishing to make changes to a Grade III site would have to apply for a permit from the local authority if the powers to do this have been devolved by the PHRA. If these powers are not yet devolved, the permits are issued by the PHRA.
- ☐ Grade II places are of provincial significance, and can be declared Provincial Heritage Sites. As noted, all former national monuments are now provincial heritage sites and are the responsibility of PHRAs.
- ☐ Grade I places are of national significance and are the responsibility of SAHRA. They can be protected formally by declaration as National Heritage Sites. All permits for changes to these sites are issued by SAHRA.

Identifying and assessing sites

While heritage sites in the built environment are relatively easy to identify in a local government survey, the same cannot be said for older sites that are often buried below the ground. There are only about 60 archaeological and palaeontological sites in the country (out of more than 3 000) that have been formally declared national or provincial heritage sites. All the rest are given general protection by the NHRA. This means that no-one may destroy, damage, excavate, alter, deface or disturb any site; or remove, collect, own or export any archaeological or palaeontological material, without a permit from the relevant PHRA, or from SAHRA if there is no archaeologist employed at the PHRA.

One way of identifying and assessing the significance of archaeological and palaeontological sites is through the process of environmental impact assessment legislated by the National Environmental Management Act and its regulations, and in section 38 of the NHRA. When certain activities such as rezoning, mining or major construction are contemplated, developers are obliged through the legislation to appoint specialists to assess the impact that the development will have on the heritage resources. The sites identified in these impact assessments can then be graded and incorporated into surveys and databases for future regional planning.

If they are of high significance, the developer is obliged either to re-design the development to avoid impacting on the site, or to pay for mitigation (i.e. a rescue excavation) to sample the site and keep the material in a museum for future research. It is important in this process that a good working relationship is developed between the provincial department of environmental affairs and the PHRA or SAHRA so that the heritage resources reports are assessed by people with the relevant expertise and information about the location of sites can be incorporated into the SAHRA and PHRA databases.

In summary, the new legislation is still young and has the usual growing pains that can be frustrating to the general public. The principles behind the legislation are sound, however, and once the provincial authorities are properly established we will have a much more comprehensive system than before and better opportunities to expand our knowledge of archaeological sites in the country and to conserve them.

ARCHAEOLOGY IN BRIEF

Clay 'pot-mask' in KZN. An ancient clay 'pot-mask' has been dug up on a building site in Mtunzini on the KwaZulu-Natal. Experts said the mask was the oldest and best-preserved example of its type found in the uThungulu district. It indicates the existence of a 2 000-year-old culture based on crops and cattle. Acting Head of the History Department at the University of Zululand, Albert van Jaarsveld, an expert on the local pottery of Early Iron Age (AD 420 and earlier), says the pot-mask is from the ancient Mzonjani period, designed - unlike Zulu pottery - with an everted rim and only a single band of decoration around the neck. *The Citizen, February 2007*

An adventure both tremendous and worthwhile

Eastwood, Edward and Cathelijne. 2006. *Capturing the Spoor: An exploration of southern African rock art.* Cape Town: David Philip. Softcover, 216 pages, full colour. Price: R265 from Trans-Vaal Branch, fox@boers.org.za.

'One tends to imagine,' write the authors of this splendid new book, 'that the whole planet has long been extensively explored and that there is nothing left to uncover.' For Edward and Cathelijne Eastwood, their privilege and their challenge has been the finding of much that is 'new' in a relatively unknown region of South Africa, the Central Limpopo Basin, where different rock art traditions converge. In their telling of it, the privilege is shared with us.

This is a generous book in every way. An engrossing and accessible text is well integrated with copious and magnificent full-colour images of rock paintings and engravings as well as landscapes. Photographs are complemented by many rock art tracings to highlight features the camera cannot capture.

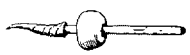
The title, *Capturing the Spoor,* is derived from a story told by an octogenarian Northern Sotho man concerning San hunters and kudu spoor, and how success was ensured in the hunt: a story the authors adopt as a metaphor for their own 15-year quest towards the understanding of traces of rock art in a region in which they had both grown up. But the book is more than a summing up of this personal odyssey, as indeed the story behind the title attests. Together with the considerable investment of effort in locating and recording over a thousand sites and their settings, Ed and Cathelijne have gathered information from their field assistants Jonas Ngoako Tlouamma and Frank Raphalalani and from other Northern Sotho and Venda informants on different aspects of culture, imagery and symbolism. Such testimony has proved not only to be relevant, but indeed enormously insightful. As Janette Deacon remarks in her foreword, these are voices that have seldom been heard in this context before. In addition, much pertinent information, as will be seen, was gained in meetings with San people in the Kalahari, the Okavango and near Kimberley.

The rock art on which this book focuses is a rather distinctive corpus in a quite restricted region. Unlike the south-eastern mountains, for instance, here three indigenous rock art traditions co-occur. More than 90 per cent of the rock art attributed to Bantu-speakers in South Africa is found in the area. And it is the only region in the subcontinent where substantial numbers of paintings and engravings are found together. Boldly bringing all of this diversity – as well as late 20th century 'art of war' graffiti by SADF conscripts – within their purview, the authors make plausible sense of what they have found. In the context of interaction, and with reference to certain key images and themes, they discern certain threads of continuity that may link the rock art traditions of the three indigenous groups who, over centuries, had lived in and, at times, shared this landscape. Frequent reference is made to the broader context of southern African rock art, drawing upon research findings elsewhere on the subcontinent (there is a comprehensive bibliography). Ultimately the book generates ideas that certainly have implications for work in other parts. If the regional focus is restricted, then, owing to the unique wealth and variety of rock art in the Central Limpopo Basin and the questions and research opportunities that arise from it, the subject matter gives this book far broader significance.

The region's mysterious Y-shape paintings are explained. These, for long, enigmatic forms are now seen as proof neither of the ancient presence of Buddhist missionaries at the Limpopo (to cite one of the more amazing previous interpretations), nor of the use of basketwork fish traps (an ethnography and rock art-based suggestion hinging on a misreading of a key painting in the area). Careful examination of paintings at many sites led to the hypothesis that the Y-shapes in fact represent male loincloths, counterparts to female aprons, both of which, as a significant component in the art, are replete with symbolic meanings. A long-term hunch to this effect appeared to be confirmed by findings in particular painted panels and comparison with museum specimens of San clothing. 'The long search for convincing evidence might have been easier had we enquired of the San themselves,' the authors add with hindsight, and a vital further strand of ethnographic evidence is now added, as part of this study, by !Kung and Khwe San people interviewed in 2004. The Y-shapes and animal skins, said the informants, were items of clothing; but, more than this, they shared with the authors the symbolism and ideas, elusive as these often are, associated with aprons and loin cloths, and the decorative motifs – beaded designs – on them. A constellation of ideas emerges that implicates the images in issues of gender and transitions, including rites of passage.

'An adventure both tremendous and worthwhile' is how Ed and Cathelijne Eastwood describe their encounter with the rock art of the Central Limpopo Basin: it is a phrase that might just as aptly sum up the book that is its result.

David Morris



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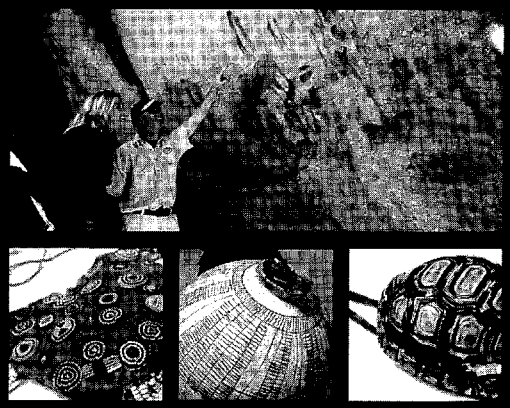

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Wondere van die lewe op aarde

Rousseau, Leon. *Die groot avontuur: wondere van die lewe op aarde.* 2006. Kaapstad: Human & Rousseau. Sagteband, 320 bladsye, diagramme en swart-wit tekeninge. ArchSoc-prys: R170.

In *Die groot avontuur* bied Leon Rousseau 'n boeiende maar komplekse tema aan – die onstaan van die aarde en die ontwikkeling van lewe. Dis lekker geskryf, vol feite, deeglik nagevors, baie leesbaar en boonop een van min Afrikaanse boeke wat die nuutste wetenskaplike teorieë aan die leek verduidelik. Soos 'n verhaal of avontuur wat ontvou, word die dramatiese evolusiegang van die mens in bondige hoofstukke ontplooi. Die storie spring weg met die oerknal 14,7 miljard jaar gelede en eindig met dramatiese klimatologiese veranderinge, in sy woorde die 'oorgangskatastrofe', van sowat 11 600 jaar gelede. *Die groot avontuur* is van besondere plaaslike betekenis, want Suid-Afrika is een van die belangrikste vindplekke van fossieloorblyfsels van die vroegste mense.

Oor die ontstaan van die aarde en sy lewensvorme lees ons in twee van die vier dele van die boek, 'Stories van lank gelede' en 'Stories van gister'. Tussen hierdie dele is daar 14 hoofstukke van 'n meer filosofiese aard onder die titel 'Tussenspele', wat vir my die lekker kern van die boek is. Hier kry ons te lees oor taalontwikkeling, die danstaal van die heuningby, die evolusie van Darwinisme, die vraag of evolusie met geloof strydig is, mens versus aap, om net 'n paar van die temas te noem. Jammer genoeg weerspieël die eerste drie hoofstukke in 'Voorspel', oor sy persoonlike ondervindings aangaande die vindplekke van oermense, nie die diepsinnigheid van die res van die boek nie. Lees maar daar verby, want die res is meestal goed.

Wanneer Rousseau dit het oor die menigte teorieë en vertolkings oor hoe lewe onstaan en ontwikkel het tot *Homo sapiens,* is daar soms fout. In 'n skynbare poging om hoofstukke kort te hou, gee Rousseau teorieë of idees weer sonder om hulle ten volle te verduidelik. Hy spekuleer menigmaal ook met teorieë en vul hulle met sy eie idees aan. Dit dra by tot opwindende leesstof, maar na my mening is daar te veel onwetenskaplike gissing. Net een voorbeeld is sy voorstel dat Saldanha-mense 600 000 jaar gelede kort steekspiese – 'eintlik dolke' – van been kon gebruik het – 'die lang femur van 'n kameelperd, byvoorbeeld, so afgebreek dat dit 'n skerp punt gehad het'. Hy hou by hierdie gedagte, selfs al haal hy emeritus-hoogleraar in argeologie aan Stellenbosch Universiteit, Hillary Deacon, se volgende kommentaar in 'n voetnota aan: 'Die dieregebeentes van Elandsfontein is sorgvuldig ondersoek vir sny- of tandmerke en ek weet van geen bewys dat hulle as gereedskap of wapens gebruik is nie.' Hoeveel mense lees voetnotas?

Die storie van die aarde en sy lewensvorme word helder en met insig vertel. Maar sy strewe na duidelikheid lei hom daartoe om feite in verskillende hoofstukke te herhaal. Om die konteks te verstaan is belangrik, maar vir my was die herhaling baie keer onnodig. Rousseau se verwondering en geesdrif oor alles wat gebeur het, of nog gebeur, stel hom ook baiemaal te onkrities tenoor sekere teorieë, en lei daartoe dat hy navorsing aanvaar wat nog kontroversieel of ver van bewese is. Voorbeelde is die redes vir die uitwissing van megafauna in Australië, of die Floris-mens as 'n nuwe spesies (*H. floresientis*). Verwysing na teenstrydige bevindings van ander navorsers sou toepaslik gewees het.

Rousseau het hom die belangrike taak gestel om die leser te probeer oorreed dat aanvaarding van wetenskaplike teorieë oor natuurlike evolusie soos deur Darwin voorgestel nie met geloof in God strydig hoef te wees nie. Verwysing na hierdie konflik duik keer op keer op.

Die vir ons bekende prof. Hillary Deacon was vir Rousseau 'n mentor wat op 'n 'baie vriendelike en geduldige manier' sy baie vrae probeer beantwoord het. So ook argeoloog dr Sarah Wurz van die Wes-Kaap. Dit is egter duidelik dat hy nie altyd hulle verduidelikings aanvaar het of hulle raad gevolg het nie. Prof. Phillip Tobias het selfs 'n *Avant propos* vir die boek geskryf nadat hy die manuskrip gelees het. Die bydraes van hierdie bekende persoonlikhede maak die boek nog interessanter vir die lede van die SA Argeologiese Vereniging.

Dit is duidelik dat Leon Rousseau, self nie 'n akademikus nie, baie navorsing gedoen het om die verhaal van die aarde en sy lewensvorme so goed te kon saamvat. Ten spyte van my aanmerkings is dit 'n spannende boek propvol wondere van die lewe op aarde wat op 'n maklik verstaanbare wyse weergegee word. Afrikaanssprekendes is gelukkig dat hulle 'n skrywer met so 'n passie vir die wêreld om hom en vir die Afrikaanse taal het. As taalkenner speel hy heerlik met tegniese en ander terme. Maar was dit nou regtig nodig om die woord 'Aborigines' te vertaal met 'Auslinge'? Dit klink soos iets uit Duitsland of Namibië. Wat is verkeerd met 'Australiese inboorlinge', soos dit in *Pharos Woordeboek* staan? *Reinoud Boers*

The books reviewed in *The Digging Stick* are available from the sales table of the ArchSoc Trans-Vaal Branch. Contact Reinoud Boers at fox@boers.org.za or 011 803 2681. For a full list of books and other sales items stocked at special prices by the Trans-Vaal Branch, go to www.archaeology.org.za.

LETTER

Notice of the completion of a bibliography of Zimbabwean archaeology

I would like to notify the readers of your newsletter that I have completed compiling and editing a bibliography on the archaeology and early history of Zimbabwe. The bibliography is available from me, on request, at no charge. It is in the form of an Adobe PDF file and can be e-mailed to all those who ask. Arrangements are also being made for it to be hosted on an archaeology website of the School of Geography, Archaeology and Environmental Studies of Wits University.

I believe that this is a valuable and helpful document for all those conducting research into Zimbabwean prehistory and the countries adjacent to Zimbabwe. The bibliography has 4 762 entries, comprehensive author and subject indices as well as a brief guide to the main sources on most aspects of Zimbabwean archaeology. Published and unpublished sources in English, Afrikaans, French, Portuguese, German and Russian have been incorporated. I hope many will take advantage of my offer.

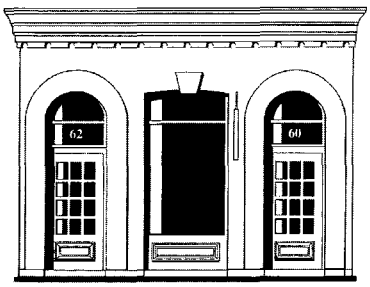
Paul Hubbard, 7 Hillside Road, Hillside, Bulawayo, Zimbabwe. Cell: +263 91 242 4505.
hubcapzw@gmail.com or dhubbard@mweb.co.zw

ARCHAEOLOGY IN BRIEF

'Oldest' papyrus is decoded. Experts from the Patras Institute of Philosophical Research and the Oxford and Brigham Young universities have used the latest technology to decode the Greek text of the world's oldest literary papyrus. The Derveni Papyrus has been in the Archaeological Museum of Thessaloniki since its charred fragments were found among the remains of a funeral pyre in 1962. It is described as a 'philosophical treatise based on a poem in the Orphic tradition' and dates to the second half of the 5th century BC. *Ekathimerini, 30 May 2006*

Eleven-thousand-year-old building in Syria. The National Centre for Scientific Research in France claims to have discovered an 11 000-year-old building on the banks of the Euphrates River near Ja'de in northern Syria. According to archaeologists, the circular building dates back to 8 800 BC and is much larger than normal houses. 'It had a collective use, probably for all of the village or a group. A part of the building takes the shape of the head of a bull and retains painted multi-coloured geometrical decorations, the oldest known in the Middle East.' Many hunting weapons and domestic tools, the majority made of flint and a few of obsidian, were discovered. *AFP, 3 October 2006*

THE CAPE GALLERY



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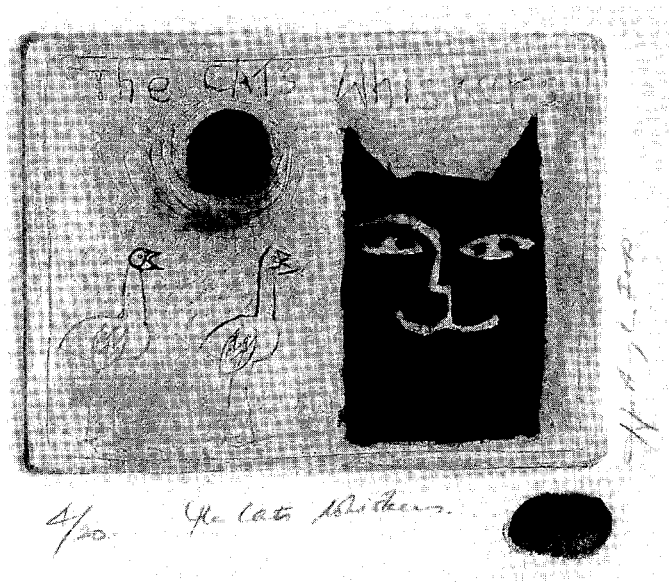
The Cat's Whiskers, by M Hattingh.
This is 4/20 in the edition.



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

STAMPS COMMEMORATE SOUTH AFRICA AS CRADLE OF HUMANKIND

Francois Durand

In the middle of 2006 I was approached by the South African Post Office to develop a series of stamps on the origin of humankind. The four fossil species I selected for the designs were *Australopithecus africanus*, *Paranthropus robustus*, *Homo ergaster* and *Homo heidelbergensis.* The choice for the main envelope design and canceller fell to the Taung Child because of this fossil's historic importance.

Mrs Ples, which has become a household name and is revered worldwide as one of the best-known hominids, was selected as the representative of *A. africanus* for the first stamp. To date the minimum number of individuals representing this species found at Sterkfontein is around 600.

The *P. robustus* skull chosen for reconstruction and featured on the second stamp was discovered by André Keyser at Drimolen in the Cradle of Humankind World Heritage Site (COHWHS). This female skull is also the most complete *Paranthropus* skull yet found. Fossiliferous remains of more than 200 *Paranthropus* individuals have been excavated at Kromdraai, Swartkrans, Drimolen and Gondolin in the COHWHS.

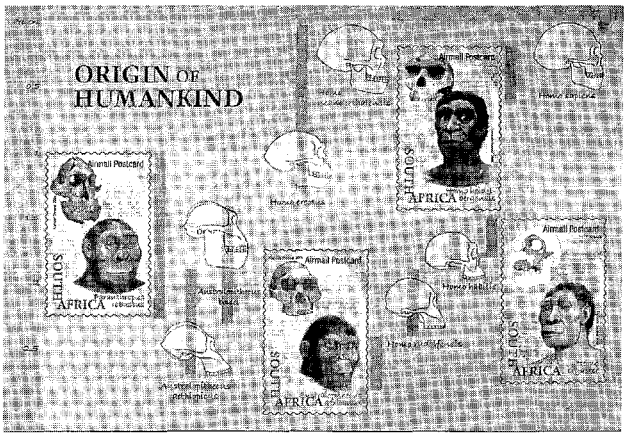
The fragmentary skull discovered by Robert Broom and John Robinson at Swartkrans, which is considered to be *H. ergaster,* was depicted on the third stamp. I used the silhouette of one of the better-preserved East African *H. ergaster* specimens as a background for the positioning of the skull fragments from Swartkrans.

The last stamp depicts *H. heidelbergensis*. This species is known from fossils of more than 50 individuals discovered in Eurasia, Zambia and Elandsfontein, 13 km southwest of Hopefield in the Western Cape. In the illustration on the stamp I superimposed the Saldanha Man cranium on the complete and beautifully preserved Kabwe (or Broken Hill) skull discovered in Zambia.

The choice of skin colour in palaeontological illustrations is often hotly debated. As a rule, artists use modern analogues to reconstruct extinct organisms because they would have been exposed to similar environmental constraints and selective pressures as extant organisms. Since hominids evolved in Africa along the Rift Valley and South Africa, it is logical to assume that dark skins, brown eyes and black hair would have been the norm for all hominids and this is how I reconstructed them.

Dr JF Durand is Senior Lecturer, Department of Zoology, University of Johannesburg. fdurand@uj.ac.za

The hominin fossils of South Africa span a period of approximately three million years and include several hominid species from ape men to the first true human beings. This fact, in conjunction with the discovery in this country of some of the oldest stone tools and first evidence of the use of fire and symbolism has rightfully earned South Africa the appellation of 'Cradle of Humankind'. This series of stamps and first-day envelope, released on 10 November 2006, bring tribute to that distinction. Every stamp is a miniature ambassador reaching far-flung corners of the world, bringing with it part of the story of the origin of humans and South Africa as the Cradle of Humankind.



Above: Self-adhesive stamp sheet. Stamp sheet size: 182,25 x 126 mm. Stamp size: 30,45 x 48 mm.

ARCHAEOLOGY IN BRIEF

Native Americans share gene signature. A distinctive, repeating sequence of DNA found in people living at the eastern edge of Russia is also widespread among Native Americans in North and South America. The finding lends support to the idea that Native Americans descended from a common founding population that lived near the Bering land bridge for some time. Kari Schroeder at the University of California sampled the genes from various populations around the globe, including two at the eastern edge of Siberia, 53 elsewhere in Asia and 18 Native American populations. She found the 9RA sequence being looked for in at least one member of all the Native American populations tested. The two populations in eastern Siberia also tested positive for the 9RA sequence. The sequence did not appear in any of the other Asian populations examined in the study.

New Scientist, 14 February 2007

WORLD ARCHAEOLOGY

Sudan archaeology flourishes

Sudan's archaeology is finally stepping out of Egypt's shadow as teams work against the clock to rescue an entire swathe of Nile Valley heritage from the rising waters of the Merowe dam, a controversial hydro-electric project being erected on the Nile's fourth cataract. 'The paradox is that, yes, an entire area is being wiped off the map, but thanks to the rescue project, Sudanese archaeology is being put on the map,' said Sudan's antiquities chief Salah Ahmed. The largest archaeological rescue project since the Nubian campaign in the 1960s during the construction of the Aswan dam in southern Egypt has unearthed heritage that would likely have remained untapped. 'This area was completely unknown to archaeologists, it was a missing chapter in Sudan's history,' Ahmed said. Sudan's pre-Christian civilisations built more pyramids than the Egyptians, but have received little attention since being defeated by Egyptian Pharaoh Tuthmosis I in the 15th century BC.

Teams of archaeologists from dozens of countries have made some significant discoveries near Merowe in the last five years. Some of the artefacts found have enabled archaeologists to redefine the borders of ancient kingdoms, such as Kerma, which ruled part of Nubia between 2 500 and 1 500 BC. They also found for the first time the foundations of a pyramid with Meroitic ceramics in the fourth cataract area. Only a tiny fraction of the vast area has been excavated, however. In addition to scorching heat and accessibility problems, there is simmering tension between the government and local communities being evicted by the dam's growing reservoir. The Manasir tribe, whose entire heartland will be submerged, has recently expelled foreign archaeologists, whom they accuse of helping the Khartoum regime put an acceptable face on the dam project. *AFP, 18 March 2007*

W. Europe's first-ever dwelling mound

A 7 000-year-old dwelling mound has been found near Oberröblingen in Germany, causing a stir among archaeologists as it is the first find of its kind in Western Europe. Dwelling mounds are most commonly associated with the Middle East. In Iraq the structures reach a height of 40 m. They are also known in the Balkans and South America. The oval-shaped German mound, which is roughly 100 m long, 60 m wide and 1,8 m high, consists of the clay remains of centuries of previous structures. Archaeologists believe that various rituals took place on the mound, including sacrifices, as two beheaded young people and next to them the fragmented skeleton of a horse, minus skull and hind legs, were found. Dog skulls and the remains of a calf were also found. One of the young people was wearing a bone bracelet and the animal skeletons were surrounded by ceramic vessels. The mound was abandoned about 5 500 years ago, but 3 000 years ago late Bronze Age people reoccupied it for another 300 years.

Der Spiegel, March 2007

On the origin of the Etruscan civilisation

The enduring mystery of the origins of the culturally distinct and technologically advanced Etruscan civilisation may finally have been solved, with a study of cattle. This civilisation inhabited central Italy from about the 8th century BC until it was assimilated into Roman culture around the end of the 4th century BC. The origins of the Etruscans, with their own non-Indo-European language, have been debated by archaeologists, geneticists and linguists for centuries. Writing in the 5th century BC, the Ancient Greek historian Herodotus claimed that the Etruscans had arrived in Italy from Lydia, now called Anatolia in modern-day Turkey.

To try and discover more about the Etruscans' movements, Marco Pellecchia at the Catholic University of the Sacred Heart in Piacenza, Italy, analysed mitochondrial DNA in modern herds of *Bos taurus* cattle in the north, south and central regions of Italy. The team found that almost 60 per cent of the mitochondrial DNA in cows in the central Tuscan region was the same as that in cows from Anatolia and the Middle East. There was little or no genetic convergence between cows from the north and south of Italy and those from Turkey and the Middle East, the researchers say. Pellecchia notes that no archaeological or genetic traces of Etruscan culture have been found elsewhere between Turkey and Italy. This, combined with the Etruscans' famed nautical prowess, leads Pellecchia to conclude that the Etruscans and their cattle arrived in Italy by sea and not by land.

New Scientist, 14 February 2007

Prehistoric compassion?

Infants may have been considered equal members of prehistoric society, according to an analysis of burial pits in Austria. Two pits, one containing the remains of two infants, probably twins, and the other of a single baby, were discovered at the Stone Age camp of Krems-Wachtberg in Lower Austria. Both graves were decorated with beads and covered in red ochre, a pigment commonly used by prehistoric peoples as a grave offering when they buried adults. Using radiocarbon dating, archaeologists from the Prehistoric Commission of the Austrian Academy of Sciences put the remains at about 27 000 years old. The unusual discovery could challenge the long-held belief that – since child burials seem to be so rare – infants in this period were treated with a degree of indifference. *Nature/LiveScience, 7 December 2006*

ARCHAEOLOGY IN AFRICA

Chimp 'Stone Age' finds

Humans might not be as pioneering as we are cracked up to be. That is one possible explanation for new evidence that West African chimpanzees learned to use stone tools on their own to crack nuts at least 4 300 years ago. The research pushes back chimpanzee tool use thousands of years. It casts into doubt the long-standing theory that direct human ancestors were the only animals to independently develop tools and that chimps learned to use stone tools by watching humans. Instead, both humans and chimps could have inherited the ability to crack nuts with rocks from a common ancestor, or chimps may have developed the behaviour on their own, Julio Mercader of the University of Calgary in Canada maintains.

Researchers found subtly altered rocks in Côte d'Ivoire at a research site that houses the only known prehistoric chimpanzee settlement. The excavated stones resemble those used by ancient humans and modern chimpanzees to smash nuts, showing evidence of flakes, chips and worn edges. Several types of starch grains were found on the stones. The most primitive human stone-tool sites are in Olduvai Gorge in East Africa, where tools date back 2,6 million years.

Today in Côte d'Ivoire's Taï rain forest, mother chimpanzees still teach their infants the art of nut cracking. It takes young chimps about seven years to master the technique. Mercader 's work emphasises that the difference between chimps and humans is not the ability to use tools, but the ability to modify the tools and share that information.

Proceedings of the National Academy of Sciences/National Geographic News, 13 February 2007

'Little Foot' is younger than thought

Sterkfontein Caves' 'Little Foot', a fossil with both ape-like and human features found by Prof. Ronald Clarke in the 1990s, is far younger than initially thought, according to Jo Walker and Bob Cliff of the School of Earth and Environment at the University of Leeds. It was first dated to between 3,0 and 3,5 million years old, and later to more than 4,1 million years. Those dates generated huge excitement. For one thing, they threw up a South African contemporary to 'Lucy', the famous *Australopithecus afarensis* fossil found in Ethiopia in 1974 and, until then, chief contender for the title of ancestor of mankind.

In a paper published in *Science,* Walker and Cliff say that Little Foot's age is likely to be around 2,2 million years. If so, rather than being man's direct ancestor, Little Foot is more likely to have been a distant cousin. The dating method is based on a measurement of an isotope of lead, Pb 206, derived from the decay of uranium 238, on layers of rock above and below the fossil. The more lead in the sample, the older the rock.

Debate has always swirled around the dating of Little Foot, with palaeontologists jousting over the age of sedimentary layers, the remains of fauna found within them and residual magnetic polarity found in ancient rock. Little Foot is not the only famous denizen of Sterkfontein to be redated. 'Mrs Ples', a nearly complete australopithecene skull found in 1947 is now considered to lie within the range of 2,15 to 2,14 million years old, the study says. Other estimates have put Mrs Ples at 2,5 million years of age, or more. According to Cliff, the earlier dating of Little Foot posed a conundrum, raising questions as to this genus' place in the hominid tree, if smarter hominids had split from *Australopithecus* many hundreds of thousands of years before. *AP, 7 December 2006*

Oldest African pottery found in Mali

A Swiss-led team of archaeologists has discovered pieces of the oldest African pottery in central Mali. The age of the sediment in which they were found suggests that the six ceramic fragments are at least 11 400 years old. Most ancient ceramics from the Middle East and the central and eastern Sahara regions are between 9 000 and 10 000 years old. The sensational find by Geneva University's Eric Huysecom and a 50-strong interdisciplinary team at Ounjougou near the Unesco-listed Bandiagara cliffs reveals important information about man's interaction with nature.

Since the launch of the Human Population and Paleo-environment in West Africa project in 1997, the team has made numerous discoveries. But the unearthing of the ancient fragments of burnt clay is one of the most significant to date. Huysecom is convinced that pottery was invented in West Africa to enable man to adapt to climate change. 'The interesting thing is that it gives us information about when and under what circumstances man can invent new things,' he explained. 'The invention of ceramic is linked to transformation of the region from desert into grassland.' Some 10 000 years ago, at the end of the ice age, the climate is thought to have fluctuated between warm and cold periods. This led to the formation of an 800 km wide band of tropical vegetation extending northwards from the Sahel region, which attracted people, who slowly moved north from southern and central Africa. Wild grasses and pearl millet started sprouting on the former desert land. But for man to be able to eat and properly digest the new plants they had to be stored and cooked in pots.

The invention of ceramic also coincided with that of small arrowheads – also discovered by the team. To date, the triangle between Siberia, China and Japan is the only other area where similar pottery and arrowheads as old as those in West Africa have been found. This is important, as they both appear in same way, at the same time and under similar climatic conditions, indicating that man has certain modes of adaptation to cope with environmental changes. *Swiss Info, 19 Jan 2007*

NOTICES

Access to JSTOR journals on line

The South African Archaeological Society, in collaboration with the Association of Southern African Professional Archaeologists (ASAPA), has signed an agreement with JSTOR in Ann Arbor, Michigan, USA, to provide an on-line archive of back numbers of the *Goodwin Series* from May 2007 and *The South African Archaeological Bulletin* from June 2007. The archive will be updated regularly, but three years will elapse between the date of publication and availability on-line.

All paid-up members of the Society will be able to access all back numbers and those of the other 600 publications available through JSTOR by accessing the JSTOR website over the internet and typing in a password. If you would like to make use of this service and receive the password, please e-mail our Assistant Secretary, Carole Goeminne, at archsoc@iziko.org.za. Note that the password will only be given to paid-up members of the Society.

Western Cape produces booklet on churchyard research

Tombstones & Transcripts, St. Paul's, Rondebosch, 19th Century Churchyard is a recent publication of the Western Cape Branch of the SA Archaeological Society. The booklet includes descriptions, a plan, tombstone inscriptions and alphabetically-listed names of the deceased with dates of birth and death. Full-colour photographs are recorded on a companion compact disc.

The set (booklet and CD) may be ordered from the Western Cape Branch at R120. Packaging and postage is extra. Kindly contact Yvonne Viljoen, yv3@mweb.co.za, or Connie Feast, 021 689 5921, or write to PO Box 426, Muizenberg, 7950.

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The South African Archaeological Society

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

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

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The Society produces the following publications:

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

Subscription rates for 2007 are as follows: Individuals: Single – R165; Joint – R185; Students and Concessionaries – R130. Institutions: Local – R350; African – R350; Overseas – R650.

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