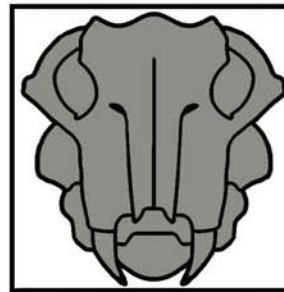


PALNEWS

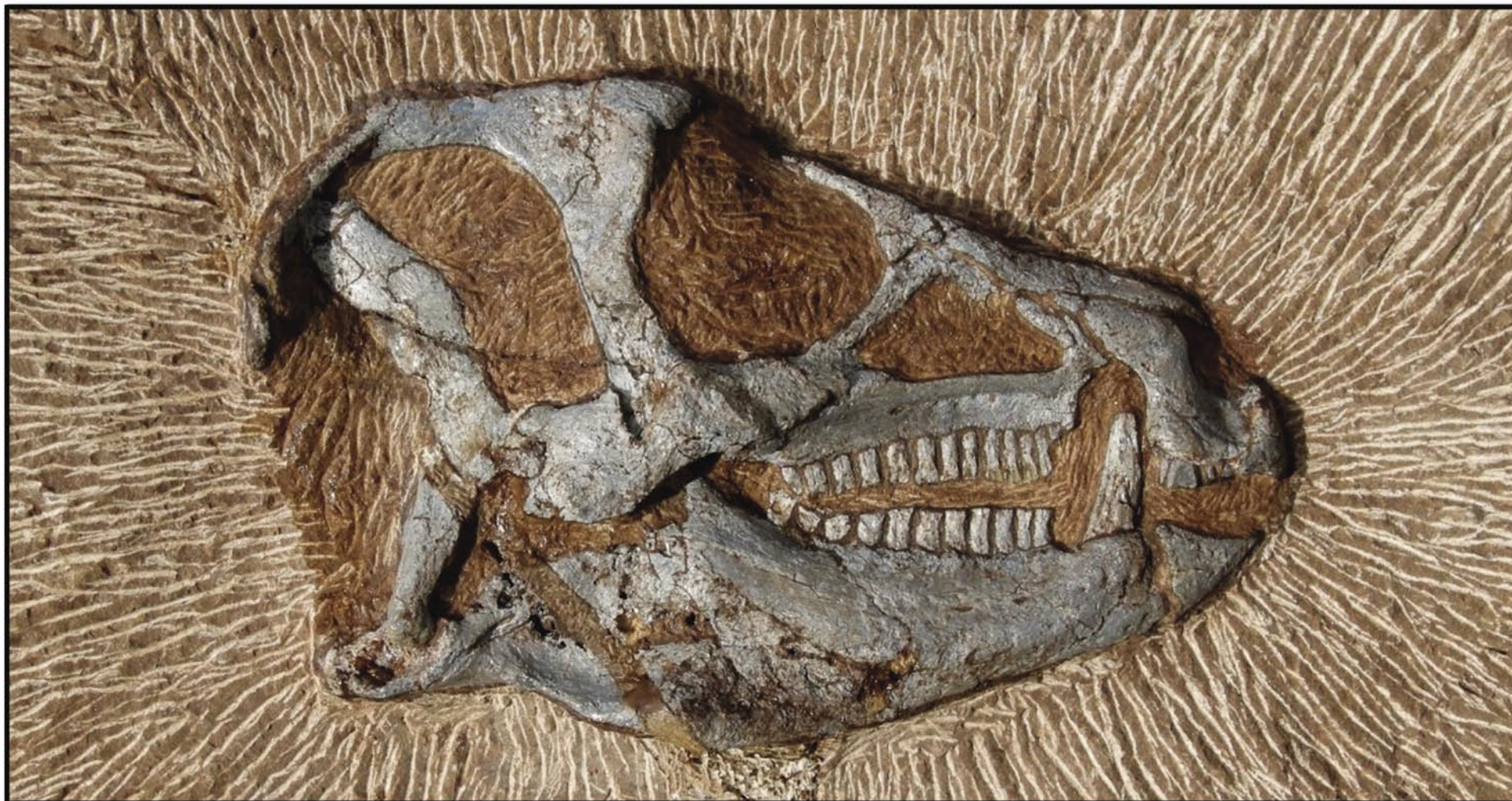
BIANNUAL NEWSLETTER OF THE PALAEOONTOLOGICAL SOCIETY OF SOUTHERN AFRICA

(HALFJAARLIKSE NUUSBRIEF VAN DIE PALEONTOLOGIESE VERENIGING VAN SUIDER AFRIKA)

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August 2009



From the Editor	3		
News from:			
BPI, Wits, Johannesburg	4		
Lucinda Backwell	4	World Heritage and Geotourism Conference	15
Marion Bamford	5	by Richard Viljoen	
Rob Gess	6		
Adam Yates	7	World Heritage and Geotourism Conference:	17
Council For Geoscience, Pretoria	7	The Clarens Golden Gate Field Trip	
Johann Neveling	7	by Chris Hatton	
Iziko SA Museum	9		
Roger Smith	9	Upcoming palaeo conferences	19
Transvaal Museum	12		
Heidi Fourie	12	PSSA members and friends - email	22
Stephany Potze	12		
From Around the World	13	Next Deadline for News	23
Alex du Toit: Christmas and fossils from Table Mountain	15		
by Herbie Klinger			

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The views expressed are not necessarily those of the Society or its Officers.

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Front cover: Photograph provided by Billy de Klerk, Albany Museum. *Heterodontosaurus* - skull and complete skeleton recently found near the village of Rossouw north of Dordrecht, Eastern Cape; Upper Elliot Formation sediments.

EDITORIAL

Dear Friends and Members of the PSSA,

This is a somewhat lean issue, but many thanks to those who contributed. I know it can be a bit of a chore getting around to writing your contributions, but it is always great to receive news from the membership. Palnews serves as a wonderful informal documentation of the activities of the palaeontological community in South Africa and our international colleagues.

Thanks to Billy de Klerk for providing the stunning photograph on the cover. He has recently made some spectacular dinosaur finds that I am hoping he will tell us about in the next issue. Billy has been seriously ill the past few months, and I speak for all of us in wishing him a swift recovery.

Some great news is that the CGS fossil collections are in good hands with the appointment of Ellen de Kock as the new curator (p. 7). It sounds like palaeontology is on the up at the CGS - perhaps a few new palaeontology posts might follow?? On the other hand, some really awful news is that palaeontology has been given the boot altogether at the South African National Biodiversity Institute (SANBI). John and Heidi Anderson, stalwarts of South African palaeobotany, have now both retired, and will not be replaced. Their magnificent plant and insect fossil collections will (thank goodness) be moved to the Bernard Price Institute in the near future. But what does this mean for South African palaeobotany? As far as I know there is now only one full time post in the country, at the BPI (this is excluding palynologists). A sad state of affairs...

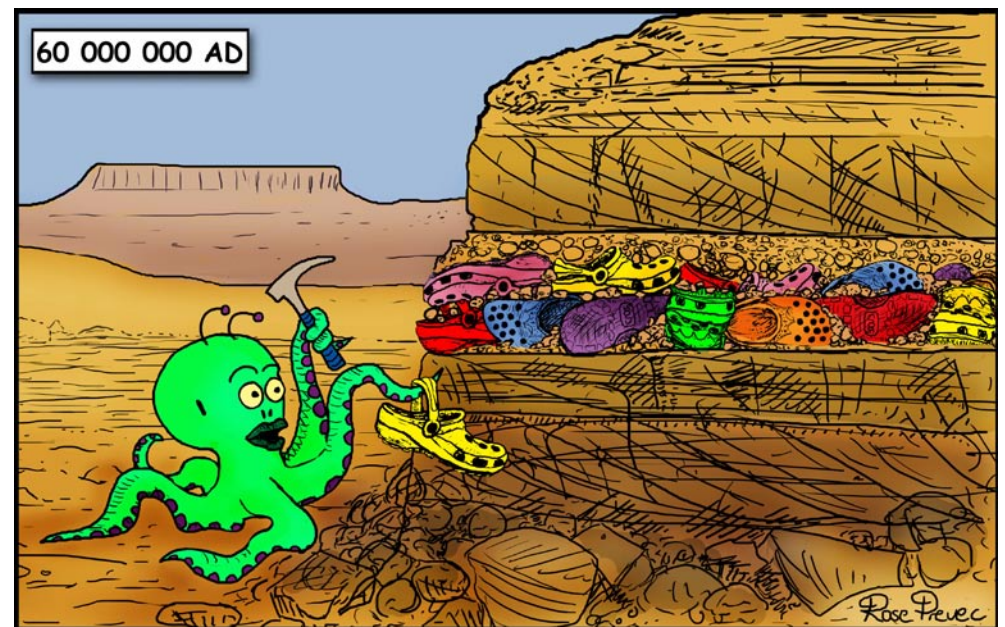
Next year is a society conference year, so please take note of the first circular for the 16th biennial congress of the PSSA to be held in Durban (p. 19). The second circular will be sent out sometime

towards the end of November. Having grown up in the KwaZulu-Natal Midlands, I can vouch for the beauty of the proposed venue and surrounding countryside!

Thanks to Richard Viljoen and Chris Hatton for their input on the recent World Heritage and Geotourism Conference held in Pretoria at the CGS, and to Pippa Haarhoff for submitting their articles. By all accounts the conference was a great success, and looks set to become a regular feature.

Wishing you all the best for the remainder of the year,
Rose

PS: Please take a look at the list of problem email addresses on the last page. If you have a more recent address for any of these members, please send it to me. I am trying hard to keep our email list current and useful. Thanks for your help!



BERNARD PRICE INSTITUTE FOR PALAEOONTOLOGY

Wits University, Johannesburg

Lucinda Backwell

Since January Lucinda Backwell and colleagues have published a paper on possible human hairs found in a hyaena coprolite from Gladysvale cave in the Cradle of Humankind, South Africa (Fig. 1). Until now, the oldest known human hair was from a 9,000 year old South American mummy. The coprolite is part of a fossil hyaena latrine preserved in calcified cave sediment dated to between 195,000 and 257,000 years ago. This time period starts just before modern humans emerged, and overlaps with the existence and end of *Homo heidelbergensis*. The hairs could belong to either of them, or of course to someone not yet recognized.

Lucinda and **Francesco d'Errico** recently presented their latest findings on early hominid bone tools in a journal article, at two international conferences and to the Science Fiction Society of South Africa. They used an optical interferometer to scan the worn areas of a sample of bone tools from Swartkrans and Drimolen, an ethnographic collection of implements used for defleshing marula fruits, and a set used experimentally to excavate in the ground and in termite mounds. Analysis of 2D and 3D roughness variables indicates that the wear pattern on the early hominin bone tools from Drimolen is not like that of tuber digging, very similar to termite foraging, and not unlike marula fruit processing. Marked differences are detected between the Swartkrans and Drimolen wear patterns, which suggests that the tools from these sites may have been used with different motions, in contact with abrasive particles of different size, or in different tasks. Results suggest that early hominin bone tools from southern Africa may have been used to forage for termites, extract tubers in a motion parallel to the tool main axis, process fruits and conduct other, as yet unidentified, tasks (Fig. 2).

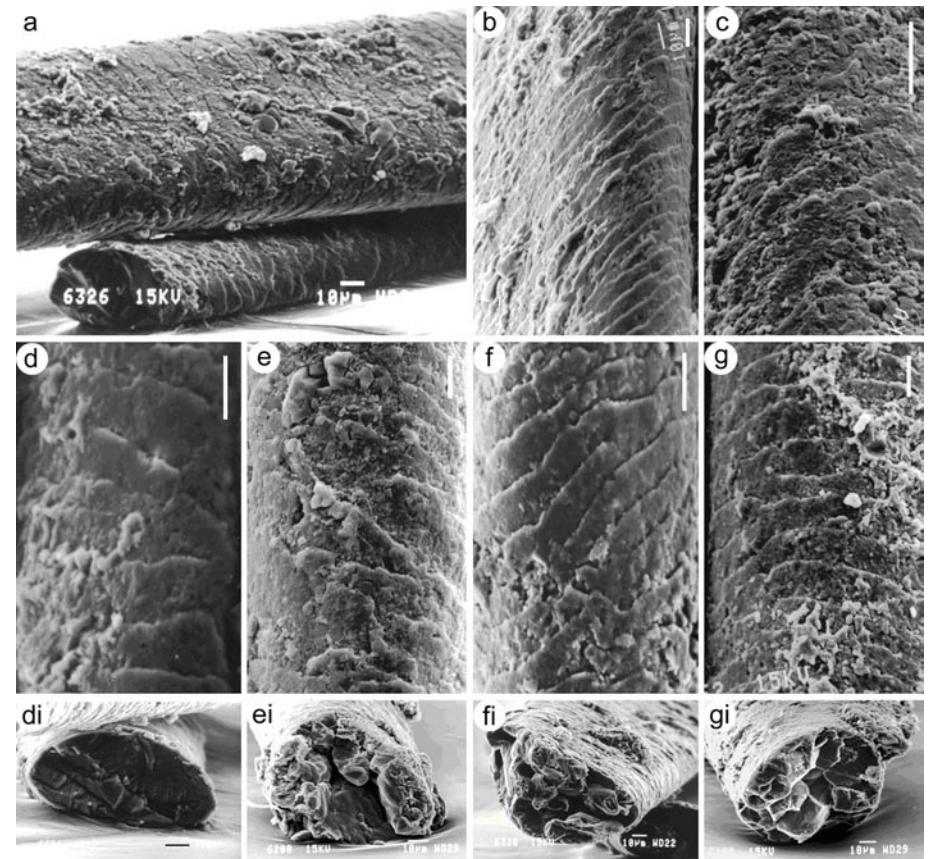


Figure 1. Scanning electron micrographs of five fossilised human hairs. The cuticular scale pattern is imbricated, with a 'regular wave' morphology. The scales lie transversely in a more or less banded manner, and the margins are both smooth and moderately rippled, and relatively evenly spaced. Scales = 10 μm .

In March Lucinda gave a Teacher Training Workshop on Human Evolution and a public evening lecture at the Natural Science Museum in Durban. She was recently elected to the Academy of Science of South Africa, and an article featuring her research has subsequently appeared in their magazine.

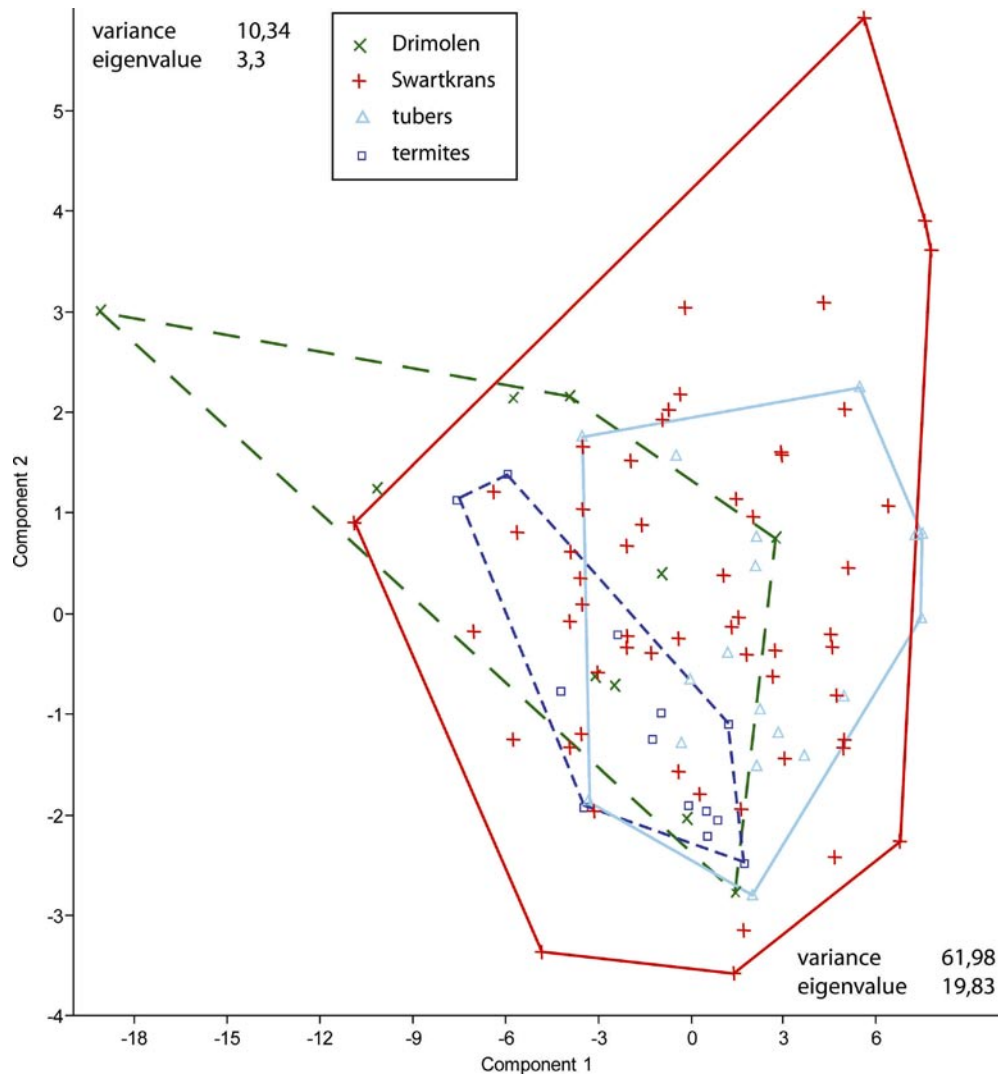


Figure 2. Plot of the first two components of the principal component analysis conducted on 2D (section) roughness data. Note the broad scatter for Swartkrans (+) that encompasses the variation for tuber digging (△), termite mound excavation (□), and Drimolen (x) with the exception of one outlier. The Drimolen scatter encompasses termite digging, and only part of the tuber digging implements, with the outliers from tools used by Nad Brain.

Publications

- Backwell, L.R., Pickering, R., Brothwell, D., Berger, L.R., Witcomb, M., Martill, D., Penkman, K. & Wilson, A. 2009. Probable human hair found in a fossil hyaena coprolite from Gladysvale cave, South Africa. *Journal of Archaeological Science*. 36(6): 1269-1276.
- Berger, L.R., Pickering, R., Kuhn, B., Backwell, L.R., Hancox, J. & Kramers, J.D. 2009. The first recorded occurrence of a fossil brown hyaena (*Parahyaena brunnea*) latrine (middens) in a cave setting in Africa from Gladysvale Cave, South Africa. *Palaeogeography, Palaeoclimatology, Palaeoecology*. In press.
- de Ruiter, D.J., Pickering, R., Steininger, C.M., Kramers, J.D., Hancox, P.J., Churchill, S.E., Berger, L.R., Backwell, L.R. 2009. New hominin fossils from Cooper's Cave (Gauteng, South Africa) and the first U-Pb date for *Australopithecus robustus*. *Journal of Human Evolution*. 56(5): 497-513.
- Backwell, L.R. & d'Errico, F. 2009. Bone tools and early hominin diet. *Society of Archaeological Sciences (SAS) Bulletin, USA*.
- d'Errico, F. & Backwell, L.R. 2009. Les outils en os des hominidés d'Afrique australe. Analyse de collections inédites et nouvelle étude fonctionnelle. *Eurasie, Eurafrique: quels premiers peuplements avant l'OIS 15? Meeting of the Institut de Préhistoire et de Géologie de Quaternaire, University of Bordeaux*.
- Backwell, L.R. & d'Errico, F. 2009. Early hominids: bone tools and behaviour. *Association of Southern African Indexers and Bibliographers International Conference. Maropeng, South Africa. 9 March*.

Marion Bamford - 15 June 2009

This has been a busy year as usual. In January I spent three weeks on Mfangano and Rusinga Islands in the Kenyan part of Lake Victoria collecting Early Miocene sedges associated with the early hominoid fossils. This research project is run by **Kieran McNulty, Will Harcourt-Smith and Holly Dunsworth** from the US and is looking at the palaeoenvironment. Seeds have previously been described from here but not the sedges. A paper on the taphonomy of the Rusinga Island seeds, part of another project, is in press in the *Journal of Human Evolution* with **Margaret Collinson** and **Peter Andrews** from the UK. I spent March at the University of Barcelona with **Rosa Albert** working on the Olduvai project. I have participated in three workshops, all related to past vegetation: ROCEEH (Role of

Culture in Early Expansions of Humans) held in Cape Town and organized by the Heidelberg Academy of Sciences and Humanities; a Bulbs and Human Origins workshop in Mossel Bay in collaboration with the SACP4 research group led by **Curtis Marean** (University of Arizona); and the Wonderwerk Cave project, near Kuruman led by **Michael Chazan** (University of Toronto) and **Liora Horwitz** (Hebrew University, Israel). I will be spending time midyear at Koobi Fora in Kenya and Olduvai Gorge, Tanzania as usual.

Natasha Barbolini (MSc) was awarded a Mellon Foundation Grant for 2009 and **Lucy Pereira** (PhD) was awarded an Oppenheimer Memorial Trust Bursary for 2009. They have spent hours in the palynology lab preparing pollen and phytolith samples respectively and now are busy with microscope work. Dr **David Steart**, post doc, has collected modern leaf material from sites in KwaZulu Natal and Eastern Cape for his leaf-climate analysis. Dr **Frank Neumann**, post doc, continues with his Lake Sibaya pollen cores and material from Princessvlei.

Rob Gess

At Waterloo Farm the National Road agency and their contractees have just finished their latest round of modifications. To recap, there was the session in 1985 when they dug us a test trench right through the hill outside the farmhouse, accommodating a highway at the bottom, and revealing the best ever late Devonian exposure in southern Africa. They returned in the mid nineties, (when I spotted the surveyors from my excavation) and Norton Hiller and I persuaded them to put up a concrete road barrier rather than demolishing and concreting. They were back on site in 1999, cutting back and benching the whole cutting. On this occasion they facilitated the removal of a 30 odd cubic metre rock sample that I put in a shed and in which I found lots of good

things. In 2006-2007 they carried out massive roadworks, removing a sizeable part of the hill. Again they facilitated my sampling, and in some cases, removal of substantial portions of outcrop before its demolition. I also got them to leave a bit of the most important outcrop in a little "heuveltjie" wat nou by die National Roads Agency die Fossiel Heuveltjie genoem is. So, my back was just recovering and my PhD making progress when in 2008, work on the roadcutting at Waterloo Farm continued. Essentially, due to problems arising from earlier work, part of the cliff below Waterloo Farm farmhouse collapsed into the road in 2008. This cliff represents stacked sandbar sediments that outcrop to the east of and below the fish bearing fossil lens. By the time I was involved the Engineers were talking about cutting back the collapsed material and the fossil heuveltjie and rockbolting and shotcreting the whole face. After a meeting with SAHRA they agreed to spare the heuveltjie. To make sure it doesn't detach itself and land in the road they've pinned it in place with rows of five metre long grouted-in rock bolts. Attached to these is a net of steel cables and cable mesh. Up to about halfway up, this is encased in steel pin-reinforced shotcrete.

Almost all the rest of the eastern end of the roadcutting, representing the sandbar sediments is now encased in a thick layer of steel grid and iron pin-reinforced concrete, with a salmon finish. Between the progressive cleaning off and shotcreting of the cliff I took digital photographs to create a systematic photographic legacy of the stratigraphy. I also collected some interesting plant stems from lag deposits in the quartzites.

The fossil heuveltjie has also now been secured with a strong fence. This is a very useful prerequisite for the possible development of an information centre and enclosed on-site excavation, at a later date.

The other thing I was quite chuffed about was to find, on receiving my copy of *Paleobotany: The Biology and Evolution of Fossil Plants* by Thomas Taylor, that it contains modified reconstructions of the two genera of Charophyte algae that I described with Norton Hiller from Waterloo Farm in 1995. It's good to see our material becoming part of the international understanding!



The shotcreted Waterloo Farm road cutting in all its glory.

Adam Yates

Adam hosted the second Germano-British-South African dinosaur expedition to the Eastern Cape. This time however we encountered problems obtaining permission from the local people who were mistrustful of palaeontological report. While we unsuccessfully tried to negotiate for permission to explore and excavate we were forced to look for new localities in the Lady Grey district. Eventually we were successful and found a rich outcrop of lower Elliot Formation on a small isolated hillock that had previously been ignored. After spending a few days there we headed north to our old stomping grounds in the Free State. We were filmed by the BBC (who were following trip

participant **Paul Barrett** as part of a doccic on the Natural History Museum) but sadly did not find much of importance. In other projects Adam has begun preparing a comprehensive osteological collection of extant South African lizards with **Nonhlanhla Vilakazi**. We hope to use this collection to identify the many fossil lizard jaws from Cooper's Cave in the Cradle of Humankind. Adam is otherwise knee-deep in unfinished manuscripts that he is frantically trying to get to completion.

COUNCIL FOR GEOSCIENCE, Pretoria

Johann Neveling

The last year or so has been a quiet period at the Council, but we have some exciting news impacting on the future of our fossil collections. As many of you are aware, Dr. Linde Karny, previous curator for the CGS fossil collection, retired at the end of May 2008. In her footsteps followed **Ellen de Kock**, who joined the Council as Scientific Officer Collections in October 2008. Ellen is responsible for the rock and mineral collection, as well as our extensive fossil collection. She holds a Masters Degree in Geology (University of Muenster) and also has a lot of palaeontological experience. In addition to being a trained fossil preparator, she also worked in various museums in Germany, served as a volunteer at the Peabody Museum in America for one year, as well as participating in several large excavations (Grube Messel and Eckfelder Maar, both Germany).

Ellen literally had to hit the ground running as half of the fossil collection had to be moved to a facility "next door" to the current one within the first month of her taking up her position. Since then things have settled down (ever so slightly), but the focus on ongoing curation of the collection and development of the database has intensified. Since March, collection curation has been supported by the incorporation of volunteer work during the week and the opportunity for wider

volunteer work on one weekend a month. Ellen also took over the responsibilities for the fossil preparation lab, while the store is being improved for research visitors. Please direct any queries regarding the collection to Ellen de Kock (ellen@nfi.museum) or Johann Neveling (jneveling@geoscience.org.za).

In addition to the collections curator the Geoscience Museum also has a new curator; **Leonie Marais-Botes** (leonie@nfi.museum), who joined the Council in November 2008. Some of the activities launched by the museum include a holiday program and a fossil table. The Geoscience Museum plans to expand its educational program which will include a strong focus on fossils.



Ellen de Kock explaining fossilization to children as part of the June 2009 holiday program.

Palaeontologically, the last couple of months have been a quiet period for Johann, although he managed to join **Rose Prevec** (Albany Museum, as you all know), **Robert Gastaldo** (Colby College), **Sandra Kamo** (University of Toronto), **Cindy Looy** (previously Smithsonian Institution, now UC Berkeley) and two of Bob's students, **Cassi Knight** and **Amelia Pludow** for a fieldtrip in the southern Karoo during early January 2009. The main purpose of this jaunt was to extend the existing

taphonomic study (based on plant material) to the lower Beaufort rocks. As the vertebrate guys will testify, pottering around in the Tap Zone is seldom easy going, but we managed to find several promising sites and plan to return for a more thorough investigation later.



Daniel Nkwinika preparing fossils.



Volunteer Pieter Reitz at the fossil table at the museum.

IZIKO SA MUSEUM, Cape Town

Roger Smith

Once again it seems that I have let a year slip by without reporting the activities of the Karoo Palaeontology team here in Iziko South African Museum.

Permo - Triassic Boundary Project

This NRF funded project can be described as the "Anatomy of an Extinction" in that it uses the rocks and fossils to tell us what happened in southern Gondwana before, during and after the great End-Permian mass extinction. It is now being written up but there are still many unprepared specimens and quite a few prepared specimens that we have not yet identified with certainty to generic level. We await the input of experts especially in dicynodonts, gorgonopsians and therocephalians to give us some guidance.

A short excavating trip to Nieu Bethesda after PSSA last year led to the retrieval of a small amphibian skull (that Claudia Marsicano reckons is something new), a large *Dinanomodon*-like dicynodont with a definite pointed beak, and the oldest recorded *Lystrosaurus mccaigi* all within a few metres of each other. These are still being prepared. I will be presenting a summary this October as part of a special symposium on Permian tetrapods at the Society Vertebrate Palaeontologists Annual Meeting to be held in Bristol.

As far as my forays into Africa with the US/French team are concerned: continued unrest in northern Niger has meant that plans for any further field work there have been abandoned and we are writing up the results we have obtained from the 2004 and 2006 trips. These are significant enough to publish, but there is still so much more. Myself, **Chris Sidor** and **Niel Tabor** took the opportunity to present our Niger results at the first North African Vertebrate Palaeontology Conference in Marrakech in May this year- a very worthwhile event and allowed some time to visit the Permo-Triassic exposures in the

Argana Basin of the Western High Atlas mountains. Whilst sampling for isotopes and looking for fossils we formulated a working relationship with the two main researchers in this area- **Nour-Eddine Jahlil** and **Abdellilah Tourani** with whom we hope to collaborate. With the results of what we found in that week, we hope to raise funds for a multi-year research project in the Moroccan Karoo.

Meanwhile our attention has turned to the P-T boundary of Zambia - in particular the North Luwangwa valley where James Kitching and Tom Kemp were the most recent palaeontologists to have done extensive fieldwork. In July this year we are finally going to do our long-awaited expedition. The team of **Sebastien Steyer**, **Chris Sidor**, **Ken Angielzyk**, **Robyn Whatley** and myself will be supported by a team of 5 locals- including a doctor. We intend to spend a full 3 weeks in the field visiting Tom's localities and hopefully scouting out a few more of our own. Although everyone is chipping in financially, it is being mostly funded by a National Geographic Society award to Sebastien.

Early-Triassic Recovery Project

This aspect of the extinction story is being covered by **Jennifer Botha** (National Museum Bloemfontein) and myself with a three year grant from the DST African Origins Platform via Bruce Rubidge's big Karoo project. The aim of this work is to investigate phases and timing of ecosystem recovery after the extinction event with special emphasis on the vertebrate communities. This of course has lots of interesting implications for the origin of mammals and archosaurs, and we are finding some superb fossils which will certainly add to this debate.

One of the ideas that is gaining ground with our recent fieldwork is that burrowing animals fared better during the extinction event than non-burrowers and I will be sounding out this topic at the Mesozoic Terrestrial Ecosystems conference in Spain in September this year.

Tracking Gondwanan Dinosaurs

This PAST- funded project in collaboration with **Claudia Marsicano** (Buenos Aires) and **Jeff Wilson** (Univ Michigan) was completed over year in review. We have mapped the early Jurassic Moyeni trackway surface in southern Lesotho in minutest detail and found some interesting behavioural traits in the bipedal theropod versus the facultative bipedal tracks attributed to prosauropods.

Last August we spent two weeks laser scanning the surface to create a 3-D digital map of these tracks which has not only provided a digital archive but has helped us detect the subtle topographic "highs" as well as the more easily recorded "lows" in the footprints. We were especially interested in an enigmatic "sloppy" trackway that Paul Ellenberger called *Episcopopus* and Paul Olsen *et al.* suggested might have been made by a chelonian. Our scanning, to a resolution of 1 mm, not only allowed us to rotate and tilt the surface to enhance the view but also removed the optical illusions caused by variable light conditions. We are now able to describe the trackmaker as a short-legged, five-toed, low slung, belly-dragging quadruped-probably an amphibian.

The palaeoenvironmental setting and indenter mechanics have been written up and is currently in press with the journal *PALAIOS*. Another paper comparing the way theropod and ornithiscian dinosaurs adjusted to slope and slippery surfaces is in review.

West Coast Fossil Park

This year the time-consuming formal tender procedures for the appointment of the Research Manager (Dr Thalassa Matthews), Education Consultant (Learnthings) and Webpage Designer (Eye-On Newmedia) were important steps towards achieving our goals. We are now up and running on the research, education and tourism fronts.

Research-wise the recruitment of Dr **Claire Boulter** (University Sheffield) as a post-doctoral student working with

Dave Roberts brought optical thermoluminescence dating technology into our team, and the first dates (700 000 yrs for a tortoise fossil locality in the Langebaan Fm) are encouraging in that this technique seems to confirm our current dates and may well be accurate as far back as 3 million years.

Deano Stynder's work on morphometrics of hyena mandibles and teeth has been accepted by 3P's and he is now looking at meso - and micro-wear patterns on a variety of teeth along with Peter Ungar. He is also collaborating with **James Brink** on morphology and trophic level distinction between two *Damalacra* species and has a project going with a medical imaging company in California to digitally reconstruct CAT scans of Langebaanweg skulls. Deano's excavations last year into the QSM beneath the original trenches dug by Brett Hendey has added a new dimension to the research at the West Coast Fossil Park as well as another visitor venue. He and his team found interesting microfaunal remains, a semi-articulated rabbit, two horn cores of *Damalacra* as well as grysbok.

Albrecht Mangold, a post doc from Germany, helped out with the excavation and has since come across some very interesting birds in our Langebaanweg collection, including the first swallow to be recorded from the site which we have asked him to write up for presentation at next years "Langebaanweg 2010" conference in Cape Town. Staying with the birds, french researcher **Antoine Louchart** will be doing a one year post-doctoral study of the bird fossils of Langebaanweg, starting in January 2010. The title of his project is 'A study of fossil birds from Langebaanweg: Palaeoenvironmental and biogeographical indications'.

Lloyd Roussouw's phytoliths have added another avenue of research into the fossil flora of the West Coast - a useful addition to the palynological work planned for our newly recruited Grahamstown masters student **Lara Siscio**. Deano and Lloyd have a paper in press with SA Journal of Science.

My excavations in the main "*Sivathere* bonebed" dig site have finished with a total of 80 square meters opened up and all large bones left in situ, stabilized and protected. The excavated material is currently being sieved and sorted and it is estimated that it will take the two part time preparators at least 10 years to finish. In July 2008 we found more in situ bones during a two week long clean-up operation on top of the phosphate rock inside the main tunnel. Interestingly, amongst these new finds is a dissociated juvenile hippopotamus skeleton. This associated specimen raises some interesting questions as to the relationship of the strata and fossils on top of the phosphate rock with the main chaotic bonebed at the base of the rock. Hopefully we will get round to answering these questions before the year ends.

Three large graphics panels have been erected in the dig site: full-sized *Sivathere* and *Agriotherium* skeletons, as well as a blow up of Cedric Hunter's colourful riverside scene 5 million years ago, to help the guides and the public visualize the animals that are exposed in the dig.

In March this year I spent two weeks conducting a fossil survey of the entire mined out area that is now administered by the West Coast Fossil Park Trust. This involved walking and mapping all the outcrops looking for in situ fossil bone occurrences at each level from the phosphate-cemented Late Miocene gravel member in the mine floor up to the unconsolidated sands under the present day surface. A total of 36 new fossil occurrences were found mostly in the quartzose sand and pelletal phosphorite members. These included isolated limb bones, bone breccia beds and even a rare articulated skeleton. Each occurrence was GPS'ed, photographed, logged and assessed as to the urgency of any rescue operations.

Thalassa Matthews is fully in command of the day-to-day running of the APO WCFP project and in between she and Deano are collaborating on a morphometric analysis of her micromammals to determine any significant size variations

between two similar species that may possibly be attributable to sexual dimorphism within a single species.

Thalassa and **Pippa Haarhoff** are deeply involved with educational consultants Learnthings who have presented their first proposal for a set of hands-on fossil activities for school groups visiting the Fossil Park. The group activities will enhance the learner's understanding of evolution and past life on earth and are designed to fulfill all the requirements of the National Curriculum. A suite of web-based interactives will follow.

Thalassa and Pippa along with Eye-On New Media are also branding a new look fossil park and developing the web site. The brief for the web designers is to publicize the Fossil Park and the science of the AOP/ WCFP research project with the aim of attracting more visitors to the Fossil Park.

African Dinosaur display

This has been a long time in the making but is coming together -with a deadline for December 2009 the sculptors are hard at work modeling full sized *Massospondylus*, *Syntarsus*, *Heterodontosaurus* and *Megazostrodon* models for our two dioramas. The second skeleton- that of the large theropod *Suchomimus* from Niger is up and painted, standing behind the *Jobaria* sauropod mount we did last year.

Zaituna, Cindi and Annelise are working on cleaning up fossils for the display- including some new blocks from the *Euparkeria* bonebed, collected by Gogga Brown, which contain some very nice articulated post crania.

Educational activities

Last year the Friends of the Museum spent a week in the 3-sisters area looking for fossils and generally getting to know the Karoo as well as the hospitality of the Murraysburger's who treated us to a traditional lunchtime braai. This August about 40 of us will be based at Meltonwold near Victoria West.

The American Association of Petroleum Geologists asked Doug Cole and I to lay on a five day field trip to cater for conference delegates attending their annual meeting in Cape

Town. This we did very successfully and in the process produced a very comprehensive updated guidebook of the lower Karoo sequence (up to PTB) that will serve many trips to come.



Syntarsus in the making for our new African Dinosaur display to open in December this year.

TRANSVAAL MUSEUM

Heidi Fourie

It is difficult to believe that it is June already. After starting 2009 preparing budgets, operational plans and annual technical programmes, I took a breather and went on a field trip in April. The survey of the 45 km Groot Brak River between the Suurberg and Grassridge dam is now complete. We found several good collecting localities, stratigraphic exposures and open quarries which yielded some fossils. It was, as usual, very

hot with no rain but at least this year the wind did not blow.

I attended the World Heritage and Geotourism Conference on 4 and 5 June. Although one of the organizers thought it funny to deliberately damage my motorbike the conference was very interesting. The talks were informative and thought-provoking. The Council for Geoscience is a great venue and the lunches and teas were very appetizing.

The Transvaal Museum is still without a Director and the long awaiting Repair and Maintenance Programme remains elusive. Without the air-conditioning units the building is cooling down rapidly, leaving us shivering in front of oil heaters.

I am still working on therocephalian postcranium and at present I'm taking a new look at the reconstruction of the musculature.

Stephany Potze

At the end of January 2009, Dr **Francis Thackeray** left the Transvaal Museum to take on the prestigious position as Director of the Institute for Human Evolution at the University of the Witwatersrand. He will be sorely missed at the Transvaal Museum and we wish him all the best in his new position.

In March I was fortunate to be invited By Dr **Adam Yates** (Wits) to join in on a dinosaur excavation in the Lady Grey region and at the Heelbo site.

In April I attended and presented a poster at the AAPA meetings in Chicago. This was a wonderful opportunity to see presentations of so many of the scientists who have studied the TM collections.

During the month of April, **Lazarus Kgasi** and I were involved in intensive fieldwork at Bolt's Farm in the Cradle of Humankind with our French colleagues, Dr **Dominique Gommery**, Dr **Frank Sénégas** and Dr **Sandrine Prat**. We cleared out several of the dumpsites and have some lovely specimens currently undergoing acid preparation.



Laz and Frank clearing out the dumpsite



Stephany, Laz and Dominique at Bolt's Farm

Lazarus and I will be undertaking more fieldtrips in June and July. In June, Dr **José Braga** and his colleagues from France will be in South Africa to conduct fieldwork in the Cradle of Humankind, and in July we will join Dr **Justin Adams'** team for fieldwork at the site Hoogland.

We are experiencing an overwhelming number of requests from scientists needing to visit the collections in the upcoming months, as well as many school groups wishing to visit the Broom Room. It is heartwarming to see that so many teachers are taking an active interest in teaching the finer points of evolution, especially human evolution.

The Transvaal Museum is in the process of working on a dinosaur display in collaboration with Wits, which we hope will go up in November - more on this to follow.

NEWS FROM AROUND THE WORLD

Arthur Cruickshank, Leicester University

Doctoral students Mark Evans and Richard Forrest are progressing steadily with their projects. Mark has a very nice early plesiosaurian which promises much in helping with the early evolution of the long-necked group.

Richard is treating the various regions of the sauropterygian skeleton mathematically, which seems to be producing reliable evidence for relationships (or the lack of them...) within hitherto reliably accepted families, throughout the Mesozoic.

Leslie Noe and I are sweeping up projects left over from past research, the most interesting of which is a stress analysis of the skull of a Liassic pliosaur, one of the short-neck group of plesiosaurs.

At the end of July there will be a Palaeontological Association Symposium on the evolution of all the Mesozoic marine reptiles in Street, hosted by Clarks's of Street, and their important and historical collection of historical fossils.

It should be a stimulating meeting to see where they are all pointed in current terms.

As a volunteer in the local museum, I have been putting together a display as to why we have no coal in the South of Scotland, when the Scottish Midland Valley and the Northumbrian regions, to the north and south, are historically important coal mining areas. It involves one of the well known 'Coal Surveyors', and a horse-borne trip through the Borders in the early years of the 19th century. Interesting to see the difference between the attitudes taken by the gentlemen founders of the Geological Society of London, and the hard-working, professional, field workers.

John Long, Museum Victoria

John has been busy working on Devonian fishes collected from the 2008 Gogo expedition. With coauthors **Kate Trinajstić** (Curtin Uni, W. Aust) and **Zerina Johanson** (NHM, London) they published an article in Nature this year on the origin of internal fertilisation in vertebrates (Long et al, 2009, Nature 457:1122-1124) showing that at least some arthrodires (*Incisoscutum*) were live-bearers as embryos had been found in two specimens, previously thought of as 'stomach contents'. The structure of the arthrodire (and phyllolepid) pelvic fin was reinvestigated and found to contain a long a basipterygium, as in sharks, suggesting claspers might be developed in males. The answer to this question was recently solved by the group when **Per Ahlberg** from Uppsala University visited to study our Gogo fishes. He found the specimens showing the male clasper and this paper has been accepted by Nature and will be published sometime in July (Ahlberg et al, 2009). John is also busy writing up lungfish postcranial anatomy from the Middle Devonian MT Howitt site, with his Ph.D. student **Alice Clement**, and other papers with his students **Tim Holland** and **Brian Choo** recently appeared in the Acta Zoologica volume for the 2007 Uppsala Early Vertebrates/Lower Vertebrates Conference.

Robyn Pickering

Hearty congratulations to ex-Witsie Robyn, who successfully defended her Ph.D. this year, and who has started a postdoctoral fellowship in the Isotope Group at the University of Melbourne. She can be reached at robypickering79@gmail.com.

Christian Sidor, University of Washington

Chris attended the 1st International Congress on North African Vertebrate Paleontology, which was held in Marrakech, Morocco in May. After the conference a small group, including Sidor, his student **Adam Huttenlocker**, as well as **Roger Smith** and Neil Tabor (South Methodist University), spent a few days with local geologists **Abdelilah Tourani** and **Naima Bernaouiss** visiting the Permian and Triassic rocks of the Argana Basin. Sidor and Smith will reunite to do fieldwork in the Permian and Triassic of Zambia in July and, with luck, Sidor will visit the BPI and SAM afterwards.



The dinosaurs were wiped out by a giant asteroid.

Alex du Toit:
Christmas and fossils from Table Mountain
by **Herbie Klinger**
South African Museum

Working in a museum does have its advantages. Very little gets thrown away, and now and again you come across some interesting things. We have five personal diaries of Alex du Toit, 1905, 1906, 1931, 1945 and 1946. The first, 1905 was written when du Toit was employed by the Cape of Good Hope Geological Commission, and based in the building of the South African Museum in Cape Town. Most of the time was spent mapping. The entries are usually quite cryptic, a typical entry taken at random 31 January reads as follows: "Made out accounts. Letter from Rogers. Wrote reply. Went out.....mapped NE of Glen Grey. Cold day. Warmer in afternoon but cold again at night. Cloudy but fine. Month's cycle mileage (264)[2096]" However, reading between the lines, these cryptic entries tell us something of the persona. The Christmas eve entry reads: "Out in morning on bike to Mowbray - Elsie's River Halt & back via Maitland. Started on Bechuanaland papers. Christmas day: In morning took Aleckie [son] down town. In afternoon went up mountain by Kasteel Poort & found fossils. Returned by train from Camps Bay. Fine Day" Two things are interesting; no mention of Christmas celebrations or presents; the other are the mention of fossils. In later editions of "The Geology of South Africa" mention is made of fossils from the "Lower Shales", i.e. Graafwater Formation in present-day terminology. We have in our collections two specimens labelled "Kasteelpoort", and another that, judging by the mounting bracket, must have been part of a display in the South African Museum. These, to the untrained eye look deceptively like bivalves, and are probably what Du Toit regarded as fossils. However, they are unquestionably mudclasts, and not of organic origin (see figure opposite).



Bivalve-like mudclasts from the Graafwater Formation.

World Heritage and Geotourism Conference
Pretoria 4th and 5th June 2009, Clarens 6th and 7th June 2009
by **Richard Viljoen**
Geoheritage Organizing Committee

After a number of attempts, the conservation committee of the society finally got the long awaited World Heritage and Geotourism conference off the ground on the 4th and 5th June (conference) and 6th and 7th June (field trip).

The aim of the conference was, on the first day, to showcase South Africa's World Heritage and other sites of outstanding natural (and cultural) interest and to devote the second day to presenting the story of the Ukhahlamba Drakensberg Park World Heritage Site and the Maloti Drakensberg Transfrontier Conservation area. A field trip was planned for the Clarens and Golden Gate National Park under the able leadership of the well known guide, Gideon Groenewald. See accompanying article.

The conference which was held at the Council for Geoscience's auditorium in Pretoria, attracted nearly 100 people on each day and was a resounding success. It has certainly given the conservation committee (to be renamed the Geoheritage Committee) the necessary motivation and encouragement to

take the initiative of promoting our heritage, forward. One of the reasons for the success of the conference was the fact that it was multidisciplinary in nature, bringing together, in the same way as the very successful Royal Society Conference held in Cape Town in 2008 did, speakers from varied scientific and other disciplines. No other event has to date given a holistic overview of our World Heritage and other sites and the conservation committee set out to achieve this by inviting as wide a range of speakers as possible. What we found to be really exciting was the relatively large number of first rate, enthusiastic, scientists and researchers working on many topics related to South Africa's natural and cultural heritage.

Illustrated, overview presentations by leading experts on World Heritage sites, Geoparks and tourism, as well as South Africa's unique geology, fossil record, mineral heritage and rock art, set the scene for the first day's proceedings. In this regard we were fortunate to have as speakers, Isak Rust, Spike McCarthy, Bruce Cairncross and Sven Ouzman.

Well-illustrated reviews of the Vredefort Dome, Cape Peninsula, Cradle of Humankind, Lake St Lucia (now called the Isimangaliso Wetland Park World Heritage Site) and Mapungubwe World Heritage Sites were then presented, by Roger Gibson, John Rogers, Lee Berger, Roger Porter and Tom Huffman.

A number of excellent presentations on sites or areas of outstanding natural and cultural heritage, some of which are being proposed for World Heritage or Geopark status, were also given. These included geological superlatives of the Mpumalanga lowveld and the proposed Barberton Mountain Land world heritage site presented by Carl Anhaeuser, the Walter Sisulu Botanical Gardens which has been suggested as an urban Geopark, presented by Morris Viljoen and the fascinating yet lesser known, West Coast Fossil Park at Langebaanweg of which Pippa Haarhof gave us a very informative overview.

Other talks included recent research at the Isimangaliso World Heritage Site being undertaken by Greg Botha, and man-

agement of the development in and around the Cradle of Humankind World Heritage site presented by Margaret Beater of SRK. The day was rounded off by a presentation on Geotourism in South Africa and the Geosites Database by Roger Price.

The second day, which was devoted to the Ukhahlamba Drakensberg Park World Heritage site and the Maloti Drakensberg Transfrontier Conservation area, was no less interesting than the first, with fourteen excellent speakers giving overviews of the geology and Paleontology (Greg Botha, Goonie Marsh, Adam Yates, Johan Neveling), botany, past and present (John Anderson and Clint Carbutt), rock paintings, Archaeotourism and Hiking and climbing (Sven Ouzman, Sam Challis, Ian Meikeljohn and Ken Dalglish) and tourism opportunities (Gideon Groenewald, Chaba Mokuku, Robson Dhlodhlo and Naas Schutte). We were fortunate to have with us Roger Porter from KZN Wildlife who was the author of the bid document for the Ukhahlamba Drakensberg World Heritage site, and he gave us an interesting review of the bid process and the present status of the Park. Last but not least we were privileged to have with us the honorable Monyane Moleleki, Minister for Natural Resources of Lesotho who gave a thought provoking talk on water from the Malutis. The bottom line is that three of our major rivers, the Vaal, Orange and Tugela have their sources in Lesotho and without the high precipitation on the Lesotho mountains and the storage capacity of the Khatse Dam, South Africa would have serious water problems.

Although the conference was a great success with a number of people remarking on the fact that it was one of the best they had ever been to, it highlighted how much more there is still to be done in the rapidly developing field of Geoheritage and Geotourism and how many exciting new initiatives are in the pipeline or are still to be conceived.

The key to the event and certainly something we intend working on in the future, was the multidisciplinary nature of the conference. Our society needs to work closely with other societies and organizations in building on the initiative started in

Pretoria. We need champions to assist us in this regard to help develop closer links with other professional bodies such as the Association of South African Professional Archaeologists, the Transfrontier Park organizers of the Drakensberg/ Lesotho, Richtersveld/ Namibia, Limpopo/ Sashe, Kruger/ Mozambique and Zimbabwe and other Transfrontier Parks in southern Africa. Involvement with initiatives such as the Africa Alive Corridors Project, the Freedom Challenge and trail and the Gautrain Geolink project are also important. The involvement and training of tour guides, teachers and school children as well as the involvement with provincial and local government and local communities should also be given high priority together with links with journalists, the press and TV programmes such as 50/50 and the development of a sound media policy. All of this takes time and effort and we appeal to members and other interested parties to come forward and join us in charting and developing the exciting path ahead.

Ideas on future conferences are already taking shape with Cape Town for example being an ideal location for showcasing the Cape Peninsula, Robin Island, the West Coast Fossil Park, the Cape Fold Belt, Garden Route and the early inhabitants of our coastline. A number of field trips would form an important component of such a conference and posters would be encouraged. Durban and Kimberley could also be important host cities for future geoheritage and geotourism conferences with other centres such as Barberton and George also being contenders.

The planning of the conference was a huge task and sincere thanks are due to Marcia van Aswegen who had an overseeing role for the whole event as well as organizing sponsorship for the conference. Roger Price provided invaluable assistance at the CGS in organizing the abstract volume, CD's for participants and many other administrative matters while Chris Hatton, also of the CGS, took on the unenviable role of organizing the field trip which was also a great success (see accompanying article). Juanita van Wyk was of great assistance in organizing various matters at the Council. Sally and Lully from the GSSA office were absolute

stars. This is the first major conference where they have taken responsibility for the administration of the event and they came through with flying colours. Craig Smith in his new role as executive manager was also a great help in organizing many aspects of the conference.

The Council for Geoscience and particularly their CEO Tlbedi Ramontja are to be thanked for making their facilities available to us which helped considerably to reduce the registration fee.

We are most grateful to the 30 speakers who took part in the event, for their time in organizing and presenting, without exception, outstanding, well illustrated talks and they are all on our list for future events.

Last but not least we are greatly indebted to our sponsors, viz the Council for Geoscience, MSA, SRK and the Mineral Corporation, without whose help the event would not have been possible.

World Heritage and Geotourism Conference: The Clarens Golden Gate Field Trip

by **Chris Hatton**
Geoheritage Field Trip Organizer

On Saturday morning, outside the Wimpy in Bethlehem an assortment of cars, trucks, a bus and a helicopter joined the excursion leader, Gideon Groenewald for a trip through the Clarens area and the Golden Gate National Park. The first stop was next to the Ash River. This river was once a placid stream draining the slopes of the Drakensberg. Now it is a perennial torrent which has been co-opted to serve as a part of the conduit for the water diverted from Lesotho into the Vaal dam. On the banks of the Ash River a pavement of sandstone in the Molteno Formation preserves the tracks of dinosaurs which walked across a wider river system some two hundred million years ago. Once Gideon had sensitized us, we were able to imagine that at least four different types of animal had passed that way in one season, long ago. The tracks

await proper scientific study and formal description might allow dating of them. This could resolve the issue of how close the Molteno is to the Triassic/Jurassic boundary.

After lunch in Clarens we proceeded to the famous Rooibdraai egg site. The *Massospondylus* dinosaur eggs themselves are now in Toronto but plenty of bone remains in the constantly eroding red mudstone of the upper Elliot Formation are to be seen. These bones can be followed along a layer and their abundance suggests that we were looking at more than one nesting site, and that this could have been a Jurassic breeding colony.

Rooibdraai shelters beneath a dolerite sill and was relatively protected from the wintry winds coming from the west. The next stop in the Clarens Formation was higher up and offered no protection. The benefit was that the wind was coming from the same direction as it was 190 million years ago when it deposited the sand dunes we were now examining. These rocks are now a food source for lichens. Different species of lichen digest different components of the rock and each species has its own territory, which it fiercely protects.

Rather than eat rock we had our evening meal at the Phat Chef, where the chef was somewhat disquieted by the rearrangement of the seating to accommodate Gideon's multimedia presentation on the evolution of the Karoo basin. With the aid of, amongst others, a fossilised *Lystrosaurus* skull, a fluffy (toy) cat and a beach ball Gideon painted a picture of a how a succession of ice, ocean, lake, river, desert and molten rock played their parts in depositing the rocks of the Karoo and how the increasing usefulness of a brain contributed to the survival of the mammal-like reptiles and their descendants.

The next day provided a further example of rocks as food. This time it was algae. Honeycomb weathering of sandstone had been something of a mystery, but in the Clarens Formation it can be seen that algae at the groundwater table are now digesting the rocks, and above them are the remains of

the feast, in the form of honeycomb textured rock. The caves that the algae assist in forming have long provided shelter for the human inhabitants of the area. Although the forested kloof that Gideon took us to is infrequently visited by tourists, it is well utilised by the traffickers supplying South Africa with the illicit crops grown in the Lesotho highlands and these occasionally use the caves as a temporary stopover. Evidence of past dwellers is preserved in a structure plastered into the overhang, made with cement compounded from clay and bone. Although this would appear to be of considerable archaeological interest, it has not yet been formally investigated.

The excursion finished at the site of the *Trirachodon* burrows. Here an upfaulted block brings a slab of Beaufort into contact with the Elliot formation. The Golden Gate National Park has recently been expanded and this site now falls within the northern limits of the park. The burrows are in a sodium rich clay which weathers very rapidly after exposure to the atmosphere. Fresh examples of burrows are continuously revealed in the weathering process and the preservation of the burrows presents an interesting challenge to future conservation efforts. *Trirachodon* was a mammal-like reptile, 43 cm in length. Today a horned lizard, also 43 cm long makes similar sized burrows in the plains nearby. Gideon's last entertaining biological snippet related to the supposed usefulness of horned lizard both as an aphrodisiac for males and a guarantor of faithful husbands for females. To find out why, join the next Gideon Groenewald tour through Golden Gate.

The constant comparisons of the past with present day life served as a bridge between geologists and other natural scientists. Hopefully this conference will contribute toward an understanding of the true value contained in what remains of South Africa's unspoiled natural heritage and so help it to survive the pressures imposed by the ever increasing demands of human society.

UPCOMING CONFERENCES



Palaeontological Society of Southern Africa

1st CIRCULAR – PSSA'10

CONFERENCE INFORMATION

June 2009

Dear Colleagues,

The 16th Biennial Conference of the PSSA is to be held at the Umgeni Valley Nature Reserve in Howick, KwaZulu-Natal.

The conference will run from **Thursday 5 August to Tuesday 10 August, 2010.**

Information regarding **Registration Fees** will be available in the 2nd Circular.

Provisional Programme

Thursday	5 August	Registration and ice breaker
Friday	6 August	Opening, scientific sessions
Saturday	7 August	Scientific and poster sessions
Sunday	8 August	Scientific session & society BGM
Monday 9 & Tuesday 10 August		Field excursion to local fossil sites

Suggestions for special topics and symposia are welcome.

Accommodation

Accommodation will be available at the Umgeni Valley Nature Reserve, as well as at the Howick Falls Hotel and nearby B&Bs.

Useful links

Umgeni Valley Nature Reserve:

<http://www.wessa.org.za/index.php/KZN/KZN-Umgeni-Valley.html>

Accommodation at Umgeni Valley: <http://www.wessa.org.za/index.php/Branches/KZN-Umgeni-Accommodation.html>

Howick Falls Hotel: <http://www.howickfallshotel.co.za/>



For additional information please contact:

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We look forward to seeing you in KwaZulu-Natal!

PSSA'10

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Changing Landscapes and Biotas of the Cape West Coast: Mio-Pliocene to Recent

Dear Colleagues

Building on the success of the Langebaanweg 2006 mini-symposium and workshop, a second meeting, which will take the form of a conference, is planned in the second half of November 2010. This conference forms part of the **African Origins Platform/West Coast Fossil Park** project. Several researchers and postgraduate students have been working on the geology, floras and faunas of Langebaanweg since 2006, and this meeting will provide a forum for them to present and compare results. The focus of the Langebaanweg 2010 conference will be extended to embrace other west coast fossil sites as an increasing amount of work has been done in the past 5 years on fossil sites which are geographically, if not temporally, close to Langebaanweg. These include new excavations and/or research at well known sites such as **Elandsfontein, Duinefontein** and **Hoedjiespunt 1**, as well as several new sites which are currently being analysed or excavated. We will also include a session that looks at comparisons between the west coast fossil taxa and those of eastern South Africa and East Africa.

Among the above-mentioned sites, Elandsfontein is closest in age to Langebaanweg, and accordingly exhibits archaic groups such as sivatheres and sabre-toothed cats, indicating the persistence of certain taxa from the Mio-Pliocene until the time of accumulation of the Elandsfontein fossils which is thought to be fall between 1,000 000 and 600 000 years (Klein et al. 2007). Elandsfontein is thus vital for understanding both the origins and migration of modern southern African taxa, and the profound environmental upheavals that led to the extinction of many taxa found at Langebaanweg. The temporal chasm between Langebaanweg and Elandsfontein is currently being bridged by on-going research on the later Pliocene marine terraces of the west coast. Late Middle Pleistocene and Late Pleistocene

sites such as Duinefontein, Sea Harvest and Hoedjiespunt 1, Swartklip and Yzerfontein provide information on evolving west coast landscapes and biota. A component on modern west coast ecosystems will be included in the conference.

The conference aims to bring about the sharing of research and information on Late Cenozoic biotas and landscapes in the west coast region, and to provide a synthesis of knowledge from many different areas of research. This linking together of information along a continuum of climatic and environmental change should lead to a much better understanding of the evolution and transformation of west coast ecosystems and the climatic/oceanographic changes which molded them. A special volume will be published of the proceedings of the conference.

Some of the proposed topics/issues the conference will address are as follows:

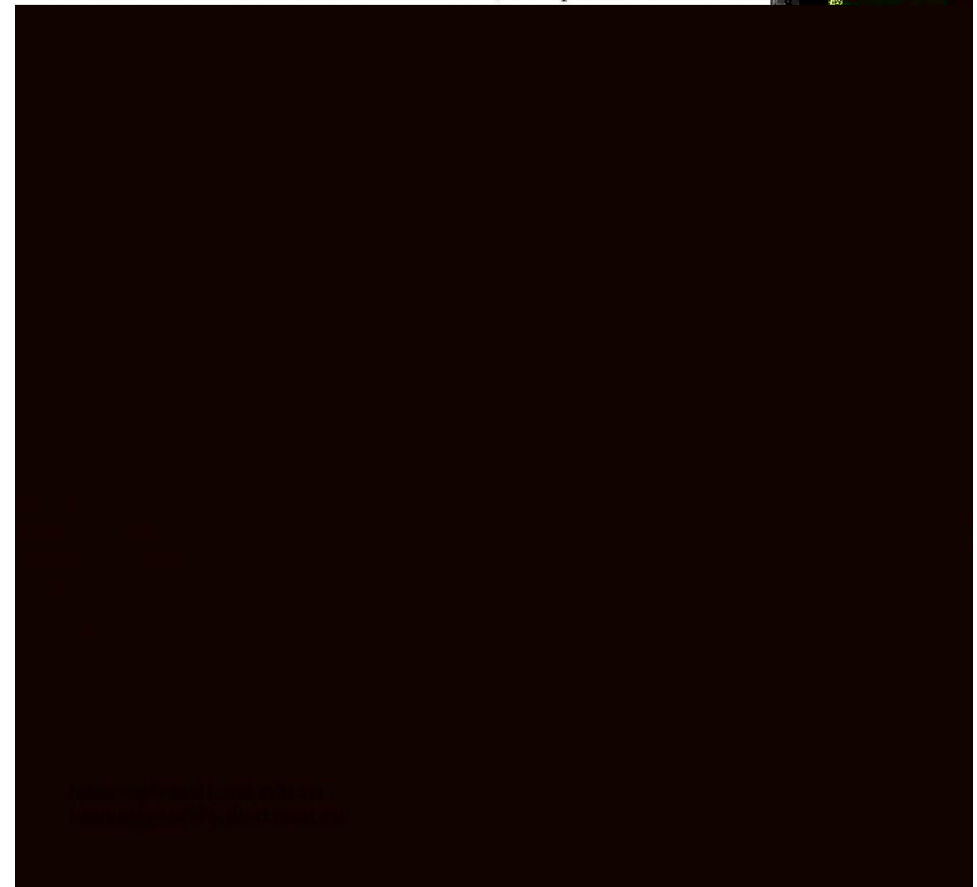
- **West Coast palaeoenvironments: The faunal evidence (Early Pliocene to Pleistocene)**
- **West Coast palaeoenvironments: Evidence from pollen and phytoliths**
- **Mio-Pliocene sites linking East and South Africa (Fauna and flora)**
- **Sea Temperature and climate change on the West Coast in the Late Cenozoic**
- **The Geology of the West Coast**
- **Dating of the West Coast Fossil sites**
- **Taphonomy and site formation**
- **Genetic data on plant and animal evolution in the Fynbos Biome**
- **West coast flora and fauna (Modern)**
- **Historical occurrence/contemporary introduction of large mammals in the West Coast region**

Fossils X 3
5th International Conference on
Palaeoentomology, Fossil Arthropods and Inclusions in Amber
Beijing, China, August 22–26, 2010



General information

The 5th International Conference on fossil insects, arthropods and inclusions in amber (FossilsX3)



The three-day conference would take place from 15-17 November 2010 and will be held at a west coast venue still to be decided. The conference will start promptly on Monday 15th November, so we suggest you aim to arrive the previous day (Sunday, 14 November 2010). We will provide transport from Cape Town to the conference venue and back for all delegates. We hope to generate sufficient funding to cover the airfare/travel costs of students who would not otherwise be able to attend, although, we are hoping that the majority of participants will be able to cover their own travel costs. If you know someone whom you think would be interested in the workshop, please forward this email to them.

Field trip: We will have a post-conference field trip which will encompass several interesting west coast palaeontological, geological and archaeological sites, the itinerary is still to be finalized.

In order to compile a list of delegates, we request that if you are interested in attending the conference please contact Thalassa Matthews as soon as possible at tmatthews@iziko.org.za.

We look forward to seeing you in November 2010.

With best wishes,

The Langebaanweg 2010 Organizing Committee

References: Klein, R.G., Avery, G., Cruz-Uribe, K. and Steele, T. 2007. The mammalian fauna associated with an archaic hominin skullcap and later Acheulean artifacts at Elandsfontein. *Journal of Human Evolution*. 52:164-186

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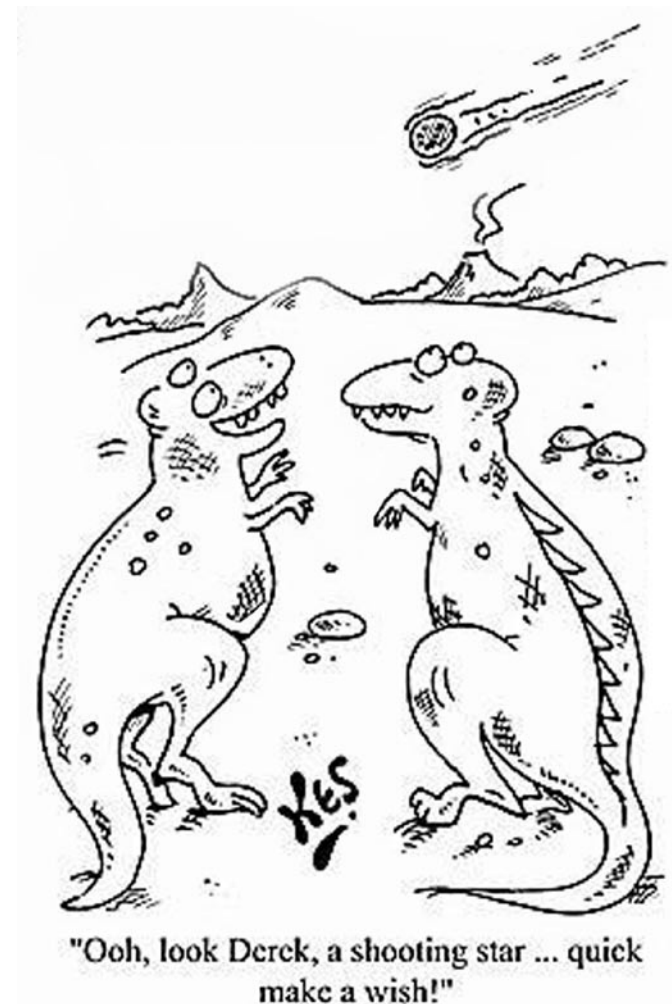
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Thanks! - Ed.



NEXT DEADLINE FOR CONTRIBUTIONS:

FRIDAY 15 JANUARY 2010