

PAL

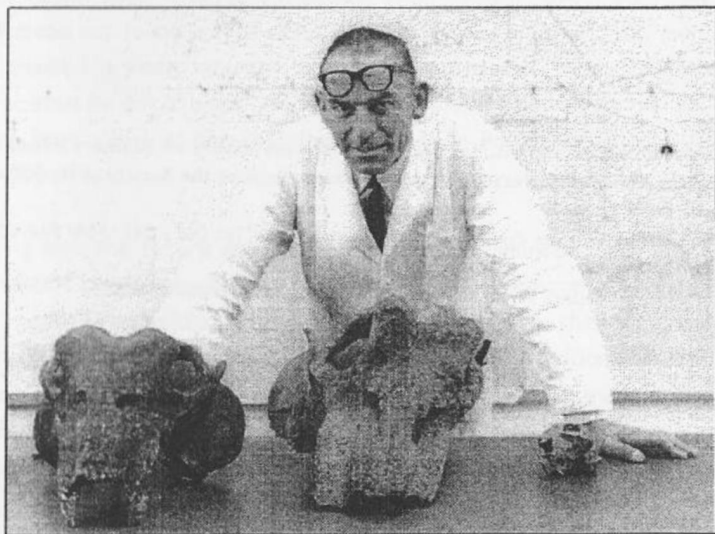
NEWS
NUUS



Biannual newsletter of the Palaeontological Society of Southern Africa.
Halfjaarlikse Nuusbriëf van die Paleontologiese Vereniging van Suider Afrika.

Vol/Band 14(3)

Februarie 2004



CONTENTS

From the Editor	pg 3
James Kitching: a tribute.	pg 4
News from:	
Billy de Klerk, Grahamstown	pg 12
Roger Smith, SAM, Cape Town	pg 14
Arthur Cruickshank, Leicester	pg 20
Francis Thackeray, Tvl Museum	pg 21
BPI, Johannesburg	pg 22
Council for Geoscience, Pretoria	pg 27
PSSA Members & Friends - E-mail	pg 29

PalNews/PalNuus is published by the Palaeontological Society of Southern Africa for its members. The views expressed are not necessarily those of the Society or its Officers.

Editor: Johann Neveling, (jneveling@geoscience.org.za) (Tel: 012 - 841 1388/ Fax: 012 - 841 1401).

Postal address: Council for Geoscience, Private Bag X112, Pretoria, 0001.

Front cover: James Kitching, legend in his own life time, passed away in December 2003, leaving behind a huge palaeontological legacy. (Photo provided by Bruce Rubidge).

Halo all!

Well, it is that exciting time of year again when many of us try and peer into the (better?) future, and shape it to our desires with good intentions and new plans. However this year my, and I am sure the entire palaeontological community's plans for the future will be weighed down with a tinge of sadness that accompany the passing of a colossus from the past. Like many of you, it was with great sorrow that I learned of the recent death of James Kitching on 24 December 2003. "Prof Kitch's" absence will leave an enormous gap in the palaeontological community and it is impossible to do his legacy justice with a few words.

It is certain however, that it is not only for his scientific stature, but also his human touch that James Kitching will be missed. My own involvement with the BPI only started after Prof Kitching's retirement, so my contact with him was sadly much less frequent than I would have liked. However, what stood out to me is that although not involved in the BPI any more, he still showed a keen interest in my PhD research - something sorely appreciated by any student. For a tribute to James Kitching, his life and legacy, have a look at the contribution by Mike Raath and Bruce Rubidge (pg4-10).

Looking into the future and matters at hand, I include a reminder that PSSA 2004 coincides with, and forms part of, the *Geoscience Africa 2004 Conference* to be held at Wits in July 2004. This means that the deadlines are much earlier than we are accustomed to. Both registration and abstract submission **deadlines** are the **31st of March 2004**, so get those abstracts coming! For more information see the enclosed pamphlet or visit the conference website at: www.wits.ac.za/geoscienceafrica

All that remains is to wish you a successful 2004!

Johann

JAMES WILLIAM KITCHING - A TRIBUTE

The man ...

James Kitching, one of South Africa's foremost palaeontologists, and arguably the world's greatest fossil-hunter of all time, took his leave of this world quietly on Christmas Eve, 2003, in his 82nd year.

It was perhaps typical of the man that he would choose to go when everyone's attention was focused elsewhere - on the joyous preparations for Christmas, so he could go without fuss. It was a little surprising, and not a little disappointing, that the media didn't pick up on this sad but newsworthy event sooner than they did, but understandably their attention, too, was focused elsewhere. James, though, would have been pleased; he disliked the limelight, preferring a 'back-room' role where he could quietly get on with the job. For him it was something of a trial to have to deal with the media - not because of any particularly negative attitude towards reporters, but simply because he preferred to avoid the spotlight.

There is a unique and inspiring story waiting to be told about *Professor* Kitching, the palaeontologist and teacher, and I have no doubt that some biographer will sooner or later tackle that - but aspiring biographers should be warned: James was adamant during his lifetime that his story was nothing to fuss over and therefore not worth the telling. Accordingly he chose not to co-operate with any who wanted to write about him during his life; so his papers are not neatly sorted and stacked, ready for any eager potential writer. He didn't want it, and as far as he was concerned, that was that. But I'm quite sure it won't be left there - it *can't* be; it is unthinkable to let the Kitching legacy simply evaporate into thin air, so one secretly hopes he wasn't able to keep his promise to himself that no biographer would ever get hold of his personal notes and records. In this we need the co-operation of the family so that the world can properly honour and cherish the memory of their - and *our* - James.

Who was this man, James Kitching?

Known to generations of students as 'Prof Kitch' or 'Oom James', to legions

of scientists from all over the world as 'Kitch', and to those of us privileged to call him friend simply as 'James', never 'Jim', he was universally loved and deeply respected by all who came into contact with him.

His origins were humble, and he himself was a humble, self-effacing man, in spite of all the accolades and honours showered on him by his scientific peers and the media around the world. But behind that humility there was also an edge of pride - not a pompous, puffed-up, egotistical pride, but a quiet self-assurance; a determination to succeed and to be the best he could be. He once said to me that what guided him in life was a simple motto that his father, Croonie, had given him as a young lad: "In everything you do, always endeavour to give your very best". Croonie would have been hugely proud of the way James lived up to that motto throughout his long, active and distinguished life.

Another quality immediately identifiable with James was loyalty - to his family, his friends, and to the University that employed him throughout his entire working career from his demobilisation at the end of World War II to his final retirement in 1996. He felt a deep sense of gratitude to the University for the opportunities it gave him to interact with young students and with scientists at the highest level, to travel the world, and to make his mark. The University in turn, I know, appreciates the unfailingly positive PR it got as a result of his activities, but I'm not sure if the University yet fully appreciates the true extent and value of Kitching's contribution.

Anyone working with James never failed to be astonished by his energy. One minute he'd be at the bottom of a deep donga, scouring the exposures with his legendary x-ray eyes - usually with his glasses resting on his substantial brows under his enormous felt hat, ready to be flicked down onto the bridge of his nose with a deft quick nod, to pick out the concealed clues that identify something as worth collecting; next minute he'd be way up at the top of a nearby steep mountain, doing the same thing or else collecting his favourite 'turksvye' (prickly pears) for breakfast next morning.

Field-work with him was always fun, always fulfilling, and *always* hard work. His success at finding fossils in the field was simply breathtaking, and always an inspiration to those accompanying him, causing them to re-double their efforts. His impish sense of humour came to the fore at these times. I well remember several occasions when back in camp at the end of a hot and busy day scouring the bare rock faces for fossils, we would gather around the camp table and empty our rucksacks to show our pickings. Out we would proudly pour the odd scraps and fragments that the rest of us had found; then would follow the gems and jewels that the Master had



James Kitching in the field. Photo courtesy of Francis Thackeray

collected - complete skulls, articulated skeletons, unique trace fossils. And then, with a twinkle in his eye, James would say, pointing to a particularly lovely and complete specimen in his pile on the table: "Mike, didn't you see *this one*? Your footprint was right *there* next to it!"

A few hours under his guidance in the field, and everyone, no matter how blind, ham-fisted or incompetent, was finding worthwhile specimens. His gift for spotting fossils in the field is justifiably the stuff of legend, but he was more than willing to share with anyone interested his tips and techniques for searching an exposure. As good as some got, however, I

know none who were his equal. This quality of generosity and willingness to share his knowledge, his skills, and whatever else he had, with others characterised him as much as any of the many other admirable qualities that defined him.

His field camps were always meticulously organised and efficient, almost military, but at the same time welcoming and comfortable. Having worked for years in the uncompromising harshness of the barren Karoo, he knew how to select a good camp-site in even the most unprepossessing terrain. His philosophy was 'Any fool can be uncomfortable in the veld'. In spite of all his other duties as expedition leader, he always undertook the chores of chief-cook-and-bottle-washer for the camp - and without fail he produced the most delicious, wholesome, and *mountainous* meals with hardly ever a can in sight. To him 'blikkieskos' was an abomination. Over the years he perfected his own special techniques for keeping food fresh for weeks on end without the help of any fridge or cooler box, even in the most oppressively hot conditions.

I am privileged to be responsible for looking after the fossil collections at Wits University, which truly are *the* legacy of and monument to James William Kitching. The famous tribute to Sir Christopher Wren in St Paul's Cathedral applies also to James Kitching: "If ye seek his monument, look around you". More than 90% of what is in the Wits collections was collected by James himself, assisted over the years by a number of field assistants, none more dedicated or productive than his long-time field companion and friend, the late Regent Lukas Huma, who shared many cumulative years in the field with him. Those collections are indeed a lasting tribute to their skill, dedication and determination. To collect those fossils they had to hump them in their rucksacks on their backs, often over miles of rough veld, steep mountains or deep dongas, on days that were sometimes blisteringly hot, sometimes freezing cold, to the vehicle parked miles away because the terrain was too rough to get it closer.

James was above all a family man. His wife of more than 50 years, Betty, was his 'Rock of Gibraltar'. She stood beside him through all the years,

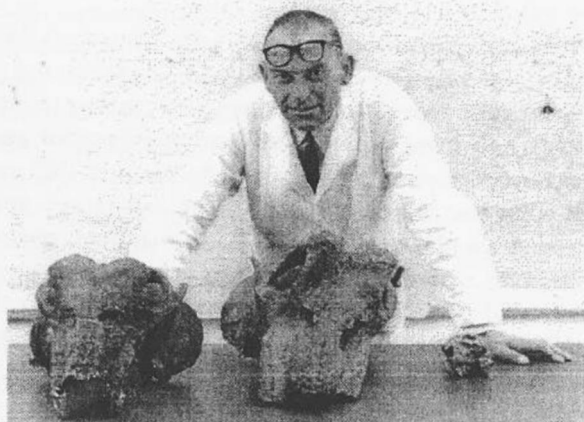
supporting him steadfastly in all he did, and making sure that home always remained 'home', no matter what. During the long and lonely times when he was out on field work, or overseas on scientific trips, Betty was there at home, keeping things shipshape, ticking over and on course. Likewise their children, Marie, Felicity and Matt, meant the world to James, and the untimely deaths of both Marie and Felicity within a year of each other recently were blows almost too much for both James and Betty to bear. This family has had much to endure over the past few years, and it speaks volumes for the love and support of Betty and Matt, sons-in-law, Bok and Geoff, and their children, that James could face his long and tough battle against failing health for as long as he did, and that when the end finally came, it came peacefully and at home - surrounded by those he loved, and who loved him. To them all, but especially to Betty and Matt, and James's surviving brothers and sisters, go our warmest thoughts and deepest sympathies.

Mike Raath

The scientist ...

James Kitching, the world's greatest fossil finder, passed away on Christmas eve in 2003 marking the end of an era of palaeontological giants in South Africa. He was born on 6 February 1922 in Graaff-Reinet. His introduction to fossils came at a young age as he used to collect fossils for Dr Robert Broom with his father, Croonie, and his brothers in the mountains around the picturesque village of Nieu Bethesda where he grew up. James found his first fossil at the age of 6, and only a year later he discovered his first type specimen, named *Youngopsis kitchingi* in his honour by Robert Broom. At this stage of his career he could hardly have guessed that this fossil would be only the first of many new species which he would present to science in later years.

When the University of the Witwatersrand set up the Bernard Price Institute for Palaeontological Research, James he was appointed as the first member of staff with the mandate to collect fossils from the Karoo. He started his career at Wits on 26 October 1945, and with his characteristic drive and enthusiasm he was already in the field by the be-



Professor James Kitching displaying three Lystrosaurus skulls.

gining of November. His first port of call was back in the Graaff-Reinet district to collect fossils from the area where he grew up and which he knew so well. Since then James' collecting horizons expanded and today there are few places in the Karoo where he has not been. In the process he spent many months away from home, walked numerous kilometers and collected thousands of fossils.

Because of his extreme dedication and love of fossils, the BPI today houses one of the largest fossil collections in the southern hemisphere, 90% of which were collected by James. These valuable collections are continually visited for research, by numerous palaeontologists from all continents of the globe, and will be lasting monument to this great scientist. His uncanny ability to spot a fossil in the field is renowned around the world and has brought great fame, not only to James but also The University of the Witwatersrand and South Africa.

His collecting of Karoo-aged fossils was not confined to South Africa, but he also undertook expeditions to Zambia, Zimbabwe and Lesotho, as well as the USA, Brazil and Argentina. One of the many highlights of his career was in 1970 when he was invited to Antarctica as part of the USA-

Antarctic Research Programme. Here he was responsible for the first identification of a fossil mammal-like-reptile in Antarctica, and so on palaeontological grounds proving the earlier close continental links between southern Africa and Antarctica. The highland in Antarctica, now officially mapped as Kitching Ridge, bears testimony to the fact that even in spite of freezing conditions, and hostile terrain, the Antarctic fossils could not escape the eagle eye of James Kitching. Dr Ned Colbert, organizer of the expedition, said "of all the fossil hunters with whom I have been associated none is the equal of James Kitching. He has an eye for fossils that is truly phenomenal, and his ability to discover fossils in the rocks is justly celebrated on numerous continents"

James published more than fifty papers and books on various facets of palaeontology, but his greatest works must be the publications on the distribution and biostratigraphy of Karoo fossils. His contribution to Karoo palaeontology of southern Africa and indeed Gondwana, is unrivalled, and earned him international recognition.

The palaeontological work of James was however not confined to the Karoo, as he was also involved in the study of Pleistocene mammals. In this regard he excavated and researched fossils from several cave sites, the most notable being the Cave of Hearths and the famous Limeworks at Makapansgat where he discovered the first specimen of the ape man *Australopithecus* in 1947. Together with Professor Raymond Dart he undertook pioneering taphonomic research on the bone accumulations at Makapansgat. These endeavours led him to spending time in the Netherlands, Belgium and France to study Palaeolithic mammalian faunas, and he was also involved in the analysis of fossils from Pinhole Cave in England.

Despite not having had a standard undergraduate academic background, James was given special permission by the Senate of the University to register for an MSc degree. For this remarkable piece of research on Karoo fossils he was awarded a doctorate. At the time of his retirement at the age of 69 in 1990, Professor James Kitching was Reader in Karoo Biostratigraphy and also Director of the Bernard Price Institute for

Palaeontological Research. Subsequently he was appointed Honorary Research Professorial Fellow at the Institute, a position he held until his death. He received numerous national and international awards including honorary doctorates from UPE and Wits, the *Gold Award* of the Zoological Society of SA, *The Draper Award* of the Geological Society of South Africa, *Honorary Life Membership* of the Society of Vertebrate Paleontology in the USA and the Palaeontological Society of Southern Africa, and most recently the prestigious *Morris Skinner Award* of the Society of Vertebrate Paleontology in the USA.

James Kitching achieved the greatest heights in international palaeontological endeavour, but despite the numerous accolades bestowed on him he remained a humble man who loved nothing more than to be living in a tent in the Karoo. His scientific pursuits, which involved many months away from home, were only possible because of the keen and loving support of his wonderful family, his wife Betty, son Matthew and daughters Marie and Felicity.

Bruce Rubidge

NEWS FROM: BILLY DE KLERK, ALBANY MUSEUM, GRAHAMSTOWN

Since my last communiqué, life in the eastern Cape has been kinda busy on the palaeo front. The project that kept me out of mischief for the most part was a field season in Namibia to look for dinosaur fossils. This project was undertaken in collaboration with research colleagues from Ohio and Utah, US. Over the preceding 12 months **Dr Nancy Stevens** of Ohio State University raised sufficient funds to mount a field-season to look for dinosaur fossils in the lower Cretaceous aeolian sediments of the Etjo and the Twyfelfontein Formation in Damaraland. Nancy was able to raise sufficient funding from the *PaleoSociety*, the *American Association for the Advancement of Science* (Women In Science Collaboration), the *Jurassic Foundation* and the *National Geographic Society*. I had lived and worked in Namibia in the early 1970ies and am familiar with the area so I was able to arrange for the necessary access and heritage fossil collecting permits from the Namibian authorities and landowners. We received an enormous amount of support for this exploration effort from **Dr Gabi Schneider** and the Geological Survey of Namibia.

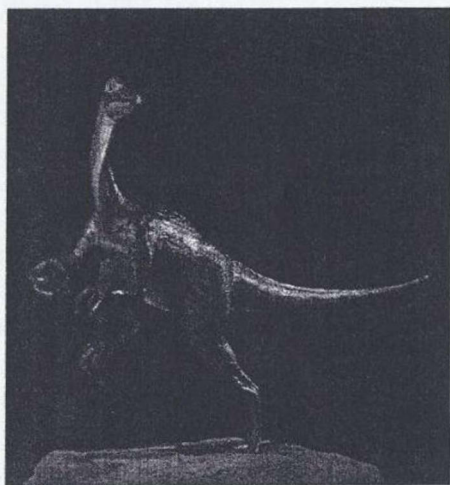
Nancy and I left Grahamstown for Windhoek on 15th August and met up with the rest of the party who flew in from the US and Tanzania. We focussed our efforts on the sediments that are exposed in the Huab River valley north of the Brandberg and also spent some time at the Waterberg Plateau National Park. Apart from Nancy (PL) and myself (co-PL) the rest of the team included **Dr Patrick O'Connor** (Nancy's husband), **Dr Eric Roberts** and **Don and Jane de Blieux** (Utah Geological Survey). During the first week we were based at the Waterberg Plateau National Park where the only dinosaur fossil (*Massospondylus*?) ever recovered in Namibia, had been found in 1999 by **Dr Frank Holzforster**. A variety of dinosaur footprints and trackways were recorded in this area but no fossil bone was found. Latex impressions of different dinosaur footprints were taken and reproduced in fiberglass once we were back in Grahamstown.

The rest of the time was spent in the Huab River Valley in the Twyfelfontein and Skeleton Coast areas of Damaraland (north of the

Brandberg). Here the c.132Ma desert aeolian dune rocks and the underlying coarse-grained Krone member sediments were explored for dinosaur bone. Two weeks were spent in this vast area but unfortunately no significant fossils were found. However the underlying Gei-eis Formation (Karoo equivalent rocks) yielded fragmentary bone and some fish fossils that were collected and brought back for identification.

Although not a palaeo success this trip was truly a highlight as we spent quality time in a vast arid wilderness area and rubbed shoulders (so to speak) with the "Desert Elephants" on a daily basis.

Other than the Namibian trip, I have also been continuing with my work on vertebrate trackways in the *Cistecephalus* Assemblage Zone of the Karoo. Apart from an extension in excavation of the main Asante Sana trackway, I have also discovered two additional trackways which are currently being written up. The largest animal (dicynodont?) indicated by the trackways appears to have had a stride of 1.45m and this translates roughly into an animal of around 2.5m long (nose to tail).



A running reconstruction of Kirky (otherwise known as Nqwebasaurus), SA coelurosaur.

On the education/display front I have been co-ordinating the production of several fleshed-out models of dinosaurs and therapsids. Our small team of Terence Coffin-Grey and Terry Donnely (they call themselves "T&T Fossils", based in Jeffery's Bay), John Hepple (technician in the Geology Dept at Rhodes) and myself were able to produce four dicynodonts (two large *Aulacephalodons* and two smaller *Lystrosaurus*) models for the South African Museum - delivered in December. In addition, we have produced a splendid reconstruction (see pg 13 - Ed.) of the small coelurosaur *Ngwebasurus* (Kirky) in a dynamic running pose that stands 55cm high and is 1m long. Profits from the sale of these various models will be used to help offset the costs of building the Paleontology Hall in the Albany Museum. 2004 looks to be a challenge and I look forward to seeing you all at the "Geoscience Africa" conference in July.

Cheers,
Billy

ROGER SMITH, KAROO PALEONTOLOGY DEPT., IZIKO (SAM)

Late last year IZIKO museums of Cape Town was awarded R2.8 million by the Lottery Board to build a new display in the SA Museum entitled "*African Dinosaurs*". Prof Anusuya Chinsamy-Turan was responsible for submitting the proposal but she unfortunately left the Museum to take up a post at UCT at the beginning of the year. The onus has now fallen on me to make this happen and I am now deep into the intricacies of obtaining dinosaur casts from Paul Sereno in Chicago. Another positive sign for palaeontology is the award of R 440 000 from DACST transformation funds to complete the "*Fossil Stories*" display and train 2 preparators for a working fossil laboratory installation in the new exhibition area. It is hoped to have this up and running by February 2004.

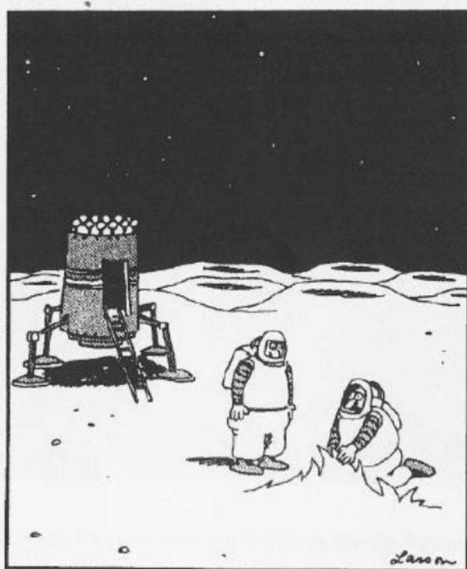
In March/April this year I spent 6 weeks in northern Niger with Chris Sidor, Robin O'Keefe, Sebastian Steyer and Hans Larssen looking for Late Permian vertebrates in the Moradi Formation around Agadez and Arlit. In



Roger brushing up against a pareiasaurian spine in the southern Sahara of Niger.

2000, Chris spend a couple of days on these outcrops at the end of a Paul Sereno dinosaur expedition and come across a peculiar "knobby" pareiasaurian skull. This helped him to persuade NGS to fund a special trip to do more collecting in these areas, and I was invited along as geologist/fossil finder. After spending a torrid week of logistical hassles in the capital Niamey we were glad to get out of the city and head northwards into the southern Sahara. The field party by this time had grown to include a US doctor (Dr "Tim" Lyman), 3 archaeologists from Niamey, 3 heavily-armed guards and a cook. Traveling in 3 extra long range diesel land cruisers we were well equipped for the desert conditions but the combination of stifling heat, engine noise, loose steering, dust and diesel fumes made the long drive north quite uncomfortable.

Most of the bones that had been found to date were from intraformational clay and limestone pebble conglomerates in the Moradi Formation that



"Say. ... It's only a paper moon."

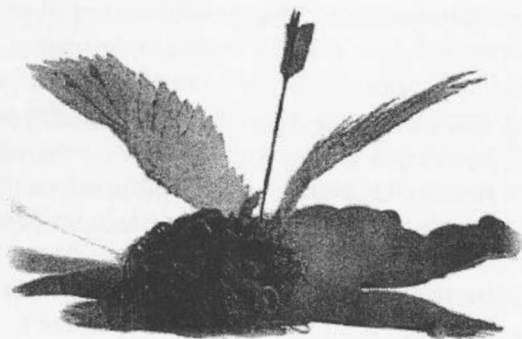
outcrop as low escarpments. However, we soon found that much more complete and better preserved specimens occur in the red mudrocks that form the bulk of the Moradi formation yet only outcrop in patches on the expansive pebble-strewn plains. Unlike the dicynodont dominated faunas of the Karoo Basin we found that the Moradi basin was dominated by captorhinids, pareiasaurs and amphibians. One locality yielded 3 new amphibian specimens that appear to belong to 3 different families- 2 of which are not known from the Karoo basin. Annelise Crean has prepared the one skull that I brought back and it is currently being studied by Ross Damiani in New York. It is unusual for a Late Permian amphibian in having laterally positioned orbits which is a generally accepted as being a more primitive condition of the Late Carboniferous forms. The rarity of dicynodonts and the unique reptile and amphibian fauna indicates a previously unsuspected degree of endemism within the centre of Pangea at this time.

In June Hedi, Paul October, Jennifer Botha and I spent a week at Meltonwold near Victoria West giving 35 Friends of the museum their annual Karoo excursion. This was boosted by the presence of our new CEO Prof "Jattie" Bredekamp, and a reporter who was contracted by *Popular Mechanics* magazine to cover the proceedings. This was published in the August edition with Arnold Shwartzenegger on the cover. The palaeo team then went on to the P-T section at Wapadsberg Pass to collect a large Permian dicynodont skull that has been waiting a year to be excavated. Whilst the plaster was drying we found some really interesting small skulls in the early Triassic redbeds which Hedi and Annie are preparing right now. The last week was spent on the farm Lemoenfontein, outside Aliwal North, belonging to the Wolvaart family. Derik Wolvaart is a nuclear engineer in Cape Town and he has been collecting mid Triassic vertebrates on the farm since he was at school. He brought some of his finds to the museum and we prepared a few of them to reveal an interesting *Herpetogale*-like bauriamorph. As a result we spent a very pleasant week relocating and documenting all his old localities and in the process recovered a fine collection of procolophonid and *Trirachodon* skulls completely encased in nodules and apparently all from a single horizon. These are being prepared at the moment. Whilst we were collecting, Jennifer got interested in the ?cynodont burrow casts that are quite common in the dark red mudrocks at the fossil rich localities. She was intent on excavating the complete burrow system but after 2 days quarrying with Paul operating the rock drill, it still had not come to an end. Nevertheless we have some good new data on the morphology, branching behaviour and depth of these structures.

In August I took time out with Dr Roger Swart (NAMCOR) and a group of De Beers geologists to explore the glacial valleys of northern Kaokoveld of Namibia. These remnant U shaped valleys still preserve the erosional striated rock walls and polished roche moutonee mounds of the original ice advance some 300 million years ago. Even more intriguing is the fact that much of the subglacial till (Dwyka Group) is still in situ and in a few places contact between striated rock floor and the till is exposed.

In September/October another 6 square metres of an Early Pliocene site there bonebed was opened up by a team from the *West Coast Fossil Park*, Langebaanweg. The Park is managed by Pippa Haarhoff of IZIKO and funded by BHP Billiton and is open to the public as an palaeo-tourism venture. My research interest there lies in reconstructing the taphonomic history of this unique occurrence. It is now clear that the diversity and abundance of bones is the result of both physical and biological agents of accumulation and the bone breakage is dominated by trampling. The controlling influence of a phosphate rock outcrop on the spacial distribution of bones is also becoming apparent as the excavation develops. During our stay at the West Coast Fossil Park, IZIKO staged its heritage week celebrations at the Park and on the "free day", 24th Sept, we were literally inundated with visitors. A new and much larger structure has now been erected over the dig site and the small tunnel is being extended and moved to cover Brett Hendey's original 1976 trenches which we intend to clean up and preserve as an additional "discovery site" attraction.

On November 6th I fly out to Christchurch, New Zealand to join a team of 7 US scientists on an expedition into the Trans Antarctic mountains to study the P-T boundary. We will be spending a total of 6 weeks in remote



Why you did not get your valentines cards this year.

camps sampling various sections for palaeomagnetism, isotope analysis, iridium analysis, buckyballs, datable tuffs, shocked quartz, logging palaeosols, logging sedimentary facies and fossils. The latter two are my responsibility. NSF are funding the project through principal investigators Prof Greg Retallack (Univ Oregon) and Dr Luann Becker (Univ California) and we hope to come up with more clues and maybe some answers as to what caused the "Mother of all Extinctions".

Next year will be very busy with exhibition related tasks but Jennifer Botha and I plan to do more fieldwork on the Bethulie P-T sections with a view to establishing the upper ranges of the various *Lystrosaurus* species along with more details of the recovery fauna, and more work on the lower parts of the Lootsberg sections to prove that the extinction was a rapid "ecologically stepped" sequence of disappearances rather than a single cataclysmic event.

Roger

Recent publications:

- * BOTHA, J and SMITH, R.M.H. (submitted) *Lystrosaurus* species composition across the Permian/Triassic boundary of South Africa. *PALAIOS*.
- * SIDOR, C.A. and SMITH, R.M.H. (submitted) A new galesaurid (Therapsida: cynodontia) from the Late Permian of South Africa. *JVP*.
- * SMITH, R.M.H. and RUBIDGE, B.S. (submitted) A New *Proburnetia* (Therapsida: Biarmosuchia) from the Late Permian of South Africa and its Implications for Trans-Pangaeian therapsid migration. *JVP*.
- * RETALLACK G.J., SMITH, R.M.H., WARD, P.D. (2003) Ecosystem extinction across the Permian-Triassic boundary in the Karoo Basin of South Africa. *Geological Society of America Bulletin*, **115**, 1133-1152.
- * SULLIVAN, C REISZ, R SMITH, R.M.H. (2003) The Permian mammal-like herbivore *Diictodon*, the oldest known example of sexually dimorphic armament. *Proceedings Royal Society of London*, **B 270**, 173-178.

ARTHUR CRUICKSHANK, LEICESTER

There is not that much to report, but some things are quite interesting! The plesiosaur research presses on, with a whole load of mental agony being generated as result of early 19th Century mistakes as to the naming of some critical specimens. Manuscripts have been written and torn up at a prodigious rate! Nothing confuses the story as much as not having the most useful types available - lost in dark corners of the NHM stores in London, and literally stumbled upon fortuitously.

One project, which I hope will be able to bring me to South Africa for the biennial meeting in 2004, is an opportunity to describe a new and pretty well preserved (if a hole in the rock can be called well-preserved?) dicynodont skull, lower jaw and humerus, from the Hopeman Sandstone, near Elgin in Scotland. A good guess is that the horizon is equivalent to the *Dicynodon* Assemblage Zone, but a species which is not similar to any South African taxa....as far as I can see! So far. Other 'dicynodonts' from equivalent horizons in Scotland include *Geikia elginensis* and *Dicynodon traquairi* (see Cruickshank and Keyser 1986, S. Afr. J. Geol.). Innovative techniques have had to be used to image this unique animal, organised by Neil Clark of the Hunterian Museum in Glasgow.



History shmistory

The person responsible for bringing the new dicynodont to our knowledge is Carol Hokin, a PhD student with the Open University, who is revising the sedimentology of the Hopeman and equivalent horizons in the north-east of Scotland, and studying the prolific track ways preserved in them (and demonstrating how good working relations with quarrymen are essential). I hope that we can have adjoining slots in the PALSOC meeting.

Finally, a series of papers on the embryology of therizinosaur dinosaurs is in preparation, based on a collection of fertile eggs made by Terry Manning of Leicester. The detail of the preservation is such that clear affinities with other maniraptorian taxa can be demonstrated. And good links between the fossils and modern taxa can be made. Watch this space! So much for a light programme...

Arthur Cruikshank

FRANCIS THACKERAY, TRANSVAAL MUSEUM

Francis Thackeray travelled to New York in October, as an invited speaker with Dr Jose Braga (University of Bordeaux), to talk on Phylogeny and Ontogeny in the context of hominid evolution, with special reference to hominids from the "Cradle of Humankind". Francis and Jose were the opening speakers in a symposium in honour of Professor Melvin Moss of Columbia, which is celebrating its 250th anniversary this year. Plans for future research were developed in collaboration with Professor Gautam Dasgupta, to involve further work on hominid fossils. It was a privilege to be invited to attend the *Moss Symposium*.

After the symposium, Francis worked on chimpanzee, gorilla and orangutan crania and postcrania at the American Museum of Natural History, and met Ian Tattersall, Ken Mowbray, Eric Delson and Will Harcourt-Smith. Returning via England, Francis visited the Natural History Museum in London and met Chris Stringer and Paul Barrett.

Frank Senegas (currently based at the Transvaal Museum) continues exciting work on mammalian microfauna from the Bolt's Farm area. Additional samples of microfauna, macrofauna and matrix have been recovered from excavations at Kromdraai, with Dominique Gommery (CNRS, Paris), Vincent Balter (Lyon), Jose Braga (Bordeaux), and a team from the University of Minnesota (Prof Greg Laden, Andrea Torgenson, Kate Schiffler). We are very grateful to Stephany Potze who is serving the role of Collections Manager as well as preparator.

Professor Michel Brunet delivered the Robert Broom Memorial lecture at the Transvaal Museum, on Toumai, the 7-million years old hominid from Chad. The lecture was very well attended, and attracted much interest.
Francis Thackeray

BERNARD PRICE INSTITUTE, WITS

All at the BPI Palaeontology will remember 2003 as the year of reviews. The Wits School of Geosciences which incorporates the BPI Palaeontology had to undergo two University reviews and I am happy to report that the BPI Palaeontology, which incorporates PURE, came through the process very well and has been recognized as one of the top Research Institutes at the University. This process has consumed much of the time of the Head of the School of Geosciences Paul Dirks and Bruce Rubidge who have had to supply all the review documentation for the BPI.

A major development was the opening of our new "Ancestors" exhibit in the *James Kitching Gallery* (the BPI Museum). The new exhibit was put together in only three months as a result of a wonderful co-operative effort of all staff of the BPI which was coordinated by our educational officer Ian McKay. The opening event (party) was a great success and was attended by many people from academia, government and industry and was officially opened by the Vice Chancellor of the University Professor Loyiso Nongxa.

Bruce Rubidge and John Hancox visited Kimberly early in September to look at inclusions of Karoo rocks in Kimberlites in a combined effort with De Beers to understand the topography of the area prior to Kimberlite intrusion. Apart from this brief excursion Bruce has not spent much time in the field during the second half of the year, but has rather been working on the completion of half finished manuscripts. The most pressing of these is the finishing touches of the publication of his Alex du Toit Memorial Lecture which was presented around the country last year. Bruce and Roger Smith have also completed a paper describing a burnetiid which Roger discovered near Aberdeen and this has been submitted for publication. Currently Bruce, John Hancox, Alain Renaut and Sean Modesto are completing their long-awaited phylogenetic analysis of Triassic dicynodonts. This is an important study as the authors have personally studied all the taxa incorporated in this analysis and are not reliant on coding from the literature.

Asleigh Jeanot is busy writing up her MSc on *Lydekkerina*, which is based on the redescription of the holotype of *Lydekkerina huxleyi*. This specimen is housed in the Natural History Museum in London but was loaned to the BPI so that further preparation could be undertaken. Asleigh has just returned from the SVP Conference where she presented the findings of her MSc research.

Juan Cisneros Juan Cisneros arrived in June to begin his PhD studies at the BPI under the supervision of Bruce Rubidge and Ross Damiani. He was born in El Salvador, Central America, and did his Master's degree studies at Universidade Federal do Rio Grande do Sul, in Porto Alegre, Brazil. His Masters dissertation focused on the procolophonids of South America. Upon completion of his studies, Juan returned to El Salvador to work at the Natural History Museum in San Salvador, for a period of two years. Juan's PhD thesis is on the relationships between procolophonoids in Gondwana, and he is paying particular attention to the genus *Procolophon*. In the short



"Look. You had five bones, right? Your friend Zooky comes over, stays awhile, then leaves. Now you have four bones, right? ... You don't have to be a 'Lassie' to figure this one out."

time that he has been here Juan has already undertaken two field trips in the beautiful Karoo, specifically to the Elliot Formation and *Cynognathus* Assemblage Zone exposures. He has also traveled to study the many procolophonoid specimens at South African Museum, National Museum, and the Council for Geosciences and Transvaal Museum to loan material for preparation and study.

Merrill Nicolas enthusiastically continues with her PhD project: the assessment of vertebrate biodiversity changes through the Permo-Triassic Beaufort Group of South Africa and its significance in terms of biological development, hiatus periods and extinction events. This has entailed many meetings with GIS specialists to set up the correct fields in order to answer the many questions which need to be addressed for this research. With the kind approval of all the curators of relevant collections in South

Africa, Merrill has begun to incorporate information from the various collections onto her database. As this is the first time that such a study has been undertaken on the Beaufort, there have been many "teething" problems but hopefully this project will highlight aspects of faunal distribution patterns which could have important consequences for future basin development models.

Emese Bordy spent several weeks in the field investigating the Elliot Formation in Lesotho. Because of some new road constructions, especially in the southern part of the Mountain Kingdom (Qacha's Neck district), she had some good opportunities to study the sedimentology and stratigraphy of the Elliot Formation. She also managed to add to the Lesotho national heritage by collecting new fossils which are housed at the Lesotho National Museum in Maseru. Emese spent an additional four weeks in the field collecting data on the stratigraphic relationship between the Molteno and Elliot Formations throughout the main Karoo Basin. The establishment of the vertical and horizontal nature of this boundary on a basinal scale would further the understanding of the foreland basin development in South Africa during the Late Triassic. She also found time to work on her 'pet topic', the study of the Early Jurassic fossil termite nests. There are at least seven new fossil localities in the Clarens Formation of the main Karoo Basin (two sites in Lesotho, five in the South Africa). These new findings show that the spatial distribution of these termite nests in the Early Jurassic was higher than previously thought in 1999 when Emese found the first fossil nest in the Tuli Basin. This research is conducted in collaboration with Dr Adam Bumby (Univ. Pretoria), Profs Pat Eriksson (Univ. Pretoria) and Octavian Catuneanu (Univ. Alberta, Canada).

Marion Bamford has been busy with lecturing, practicals and exams but managed to do some fieldwork in the Okavango Delta in September with Prof Nick van der Merwe, collecting edible sedges. Otherwise research

continues, between other commitments, on fossil woods from the west coast of South Africa and Laetoli, Tanzania.

Lucinda Backwell submitted her thesis on Early Hominid Bone Tool Industries in December 2003. She has recently been appointed as Researcher in the School of Geosciences, and looks forward to teaching primate and hominid evolution next year. In March 2003 she co-organised the conference "*From Tools to Symbols. From Early Hominids to Modern Humans*" held at Wits. The conference was a French/South African event in honour of Professor Phillip Tobias. Her current research is on the Olduvai Gorge bone tools dated to between 1.7 and 1.2 Mya. These tools originally described by Mary Leakey, were reanalysed for microscopic traces of use-wear, and evidence of intentional flaking by knapping. Post-depositional abrasion overprints any evidence of use, but a high proportion of invasive bifacially arranged removals, inconsistent with butchering for marrow extraction, make a reduced number of purported bone tools good candidates for having been intentionally shaped by hominids. Current evidence on bone tool use by early hominids indicates the presence of two cultural traditions in east and South Africa. The oldest unequivocal bone tools are attested at Swartkrans, and are thought to have been used for digging for tubers or termites.

Alain Renaut

Remember to visit the PSSA Website at:

www.ru.ac.za/pssa/

COUNCIL FOR GEOSCIENCE , PRETORIA

As one would expect, the Palaeontology Section at the Council has become a great deal quieter since the departure of **Patrick Bender**, but this did not prohibit work from progressing steadily on several fronts. The main focus of my work is still the Early to Middle Triassic rocks of the Karoo, but an interesting development has been the added botanical focus in recent months. This has been the result of my teaming up with an international research group, headed by **Hallie Sims** (Smithsonian) and **Marion Bamford** (BPI), that looks at palaeofloral changes throughout the Permian and Triassic. In November and December Hallie, **Rose Adendorff** (BPI) and myself took off on scouting trips investigating known plant sites in the Eastern Cape, and also looking for new localities that may contain any plant material of Early to Middle Triassic age. Although this is not an interval renowned for its palaeobotanical record, the early results of this investigation has been very encouraging indeed.

In keeping with the Triassic theme, I also accompanied **John Hancox** (Wits Geology), **Alain Renaut**, **Fernando Abdala** and **Adam Yates** (BPI) on a short trip to the Sterkstroom district in the Eastern Cape. This is of course the only known area where the uppermost subzone *C* of the *Cynognathus* Assemblage Zone outcrops. Little work has been done here since John discovered this fauna in the middle nineties. Since the fauna is so tantalizingly different from that normally found in the Burgersdorp Formation, we set out with the aim to find more of the beasts. Initially the going was slow and fragmentary remains was all we had to show for our hard grafting in the hot sun. However, our fossil fortunes eventually changed (for the better) towards the end of the trip with the discovery of better fossils at new fossil localities; so the Triassic story continues.

Work also continued in KwaZulu-Natal with fieldwork in October and November. The main focus was the bio- and lithostratigraphy of Late Permian and Early Triassic exposures in central KZN. Although exposures

were few and far in between, and where found often tantalisingly difficult to put into stratigraphic context, lots of data was collected, which will help to fill in the picture bit by bit. Once figured out, this should add greatly to aid our understanding of the development of the Karoo Basin.

Back in Pretoria I am happy to report that we have made some progress with the reorganisation of the Karoo fossil collection. This is almost entirely due to the efforts of **Dr Linde Karny** who has diligently continued her work on this huge task. Unfortunately she was hampered somewhat by the fact that we had to loan her to the National Core Library during the last 5 months of the year due to staff shortages, but luckily this was only temporary and our situation will be back to normal in January 2004. We are certainly looking forward to 2004 and hope to see everyone at PSSA 2004!

Johann



"A word of advice, Durk: It's the Mesolithic.
We've domesticated the dog, we're using stone
tools, and no one's naked anymore."

PSSA E-MAIL ADDRESSES

Dr Fernando Abdala	abdalah@geosciences.wits.ac.za
Dr Rose Adendorff	RoseAdendorff@ananzi.co.za
Matt Allinson	mattallinson@hotmail.com
Dr John Almond	naturaviva@universe.co.za
Dr Eric Anderson	e.anderson@ru.ac.za
Dr John Anderson	jma@nbipre.nbi.ac.za
Dr Ken Angielczyk	kangielczyk@calacademy.org
Dr Graham Avery	bcage@uctvax.uct.ac.za
	gavery@iziko.org.za
Lucinda Backwell	BACKWELL@science.pg.wits.ac.za
Shaw Badenhorst	shawb@nfi.co.za
Dr Marion Bamford	bamford@geosciences.wits.ac.za
Dr Bernard Battail	bbattail@cimrs1.mnhn.fr
Dr Patrick Bender	pkabender@yahoo.com
Dr Lee Berger	bergerl@geosciences.wits.ac.za
Dr Jennifer Botha	jbotha@iziko.org.za
Dr J. Braga	jbraga@anthropologie.u-bordeaux.fr
Dr James Brink	jbrink@nasmus.co.za
Dr Anusuya Chinsamy-Turan	achinsam@botzoo.uct.ac.za
Dr Arthur Cruickshank	cruia900@leicester.gov.uk
	aric.cruickshank@ntlworld.com
Dr Ross Damiani	DamianiR@geosciences.wits.ac.za
Dr Billy de Klerk	B.deKlerk@ru.ac.za
Dr Sue de Villiers	nifaasa@iafrica.com
Dr Daryl de Ruiter	deruiterd@geosciences.wits.ac.za
Ludwig Döhne	doehne@global.co.za
Dr Francois Durand	fd@rau.rau.ac.za
Dr Heidi Fourie	Fourie.h@nfi.co.za
Mrs T. Franz-Odendaal	tfranz@botzoo.uct.ac.za
Rob Gess	robg@imagenet.co.za
Dr Dominique Gommery	gommery@ivry.cnrs.fr
Dr Fred Grine	fgrine@notes.cc.sunysb.edu
Dr Gideon Groenewald	gideon@bhm.dorea.co.za

Pippa Haarhoff	pippah@iafrica.com
Prof AV Hall	avhall@iafrica.com
Dr John Hancox	HancoxP@geosciences.wits.ac.za
Prof Eric Harley	harley@chempath.uct.ac.za
Dr Norton Hiller	nhiller@cantmus.govt.nz
Dr Jim Hopson	jhopson@midway.uchicago.edu
Madel Joubert	mjoubert@samuseum.ac.za
Dr Gillian King	gm20@admin.cam.ac.uk
Dr Herbert Klinger	hklinger@iziko.org.za
Dr Kevin Kuykendall	kuykendall@anat.wits.ac.za
Elizabeth Latimer	elizabeth.latimer@ananzi.co.za
Prof Julia Lee-Thorp	jlt@science.uct.ac.za
Mary Leslie	mleslie@sahra.org.za
Johan Looch	geoci@rs.uovs.ac.za
Marius Loots	mloots@medic.up.ac.za
Dr Tom Mason	trm@star.arm.ac.uk
Ian McLachlan	mclachlai@petroleumagencysa.com
Dr Jeff McKee	mckee.95@osu.edu
Mrs Lynn Meyer	c/o Fourie.h@nfi.co.za
Darlington Munyikwa	munyikwa@Avu.org
Dr Johann Neveling	jneveling@geoscience.org.za
Dr Martin Pickford	c/o bsenut@cimrs1.mnhn.fr
Ms S. Potze	potze@nfi.co.za
Ms S. Prat	sandrineprat@hotmail.com
Dr Mike Raath	RaathM@geosciences.wits.ac.za
Dr Sanghamitra Ray	sray@samuseum.ac.za
Dr Alain Renaut	RenautA@geosciences.wits.ac.za
Ray Renaut	RRenaut@sci.pg.wits.ac.za
Dr Gideon Rossouw	zlagjr@zoo.upe.ac.za
Lloyd Rossouw	lloyd@nasmus.co.za
Prof Bruce Rubidge	RubidgeB@geosciences.wits.ac.za
Prof Izak Rust	icrust@iafrica.com

Dr Friedmann Schrenk
Prof Louis Scott
Frank Senegas
Dr Brigitte Senut
Dr Russell Shone
Dr Chris Sidor
Dr Roger Smith
Dr Francis Thackeray
Dr Juri van den Heever
Prof Nick van der Merwe
Dr W.F. v Zyl
Annie v/d Venter

Dr Eddie van Dijk
Prof Marius Vermaak
Dr Anne Warren
Dr Johann Welman
Dr Mike Zavada

schrenk@hrzpub.th-darmstadt.de
scottl@sci.uovs.ac.za
senegas@evol.isem.univ-montp2.fr
bsenut@cimrs1.mnhn.fr
glarws@orca.upe.ac.za
Sidor.christian@nmnh.si.edu
rsmith@iziko.org.za
thack@nfi.co.za
javdh@maties.sun.ac.za
Nikolaas@beattie.uct.ac.za
gideon@bhm.dorea.co.za
amafa.pmb@pixie.co.za
micromammal@yahoo.co.uk
eddie@vandijks.com
m.vermaak@ru.ac.za
zooaw@zoom.latrobe.edu.au
kvertpal@nasmus.co.za
mzavada@providence.edu



The Sandwich Mafia sends Luigi to
"sleep with the fourth-graders."

Reminder:

*Deadline for contributions for the next issue of
PalNews is 21 May 2004*