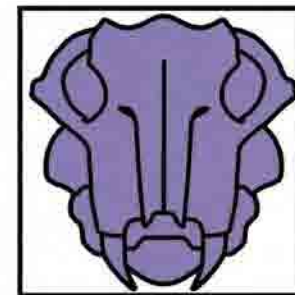


PALNEWS

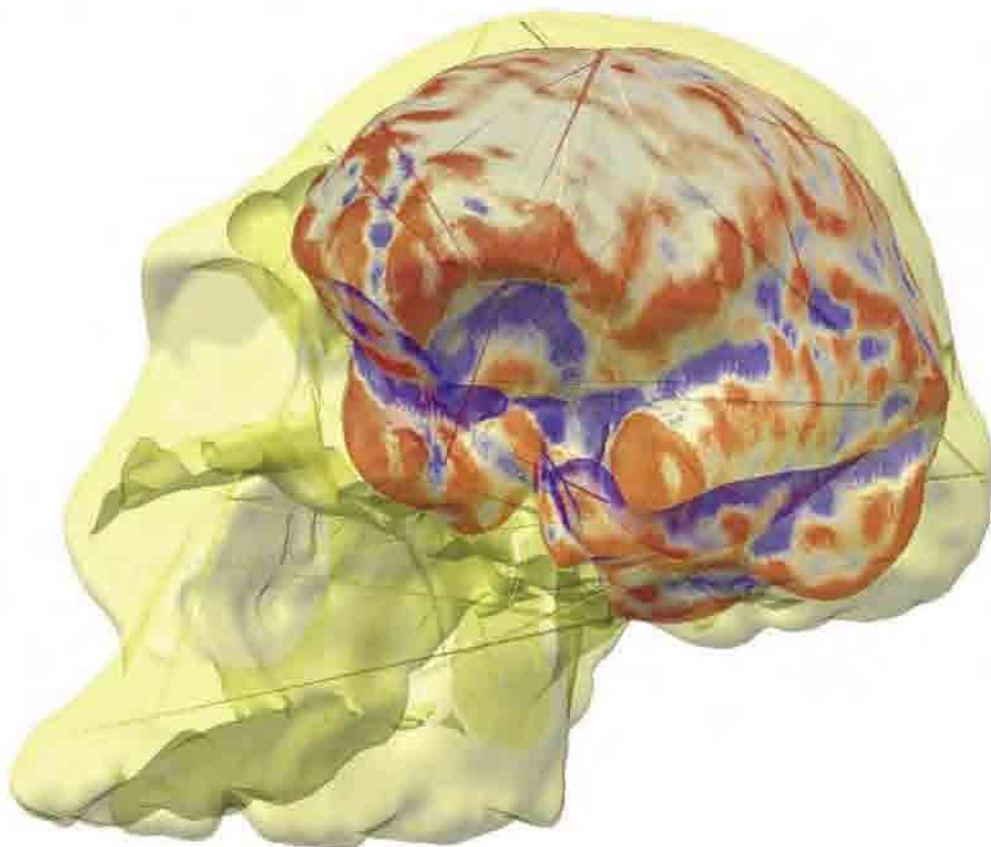
BIANNUAL NEWSLETTER OF THE PALAEOLOGICAL SOCIETY OF SOUTHERN AFRICA

(HALFJAARLIKSE NUUSBRIEF VAN DIE PALEONTOLOGIESE VERENIGING VAN SUIDER AFRIKA)

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July 2008



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

Editor: Rose Prevec, (rose.adendorff@ru.ac.za) (Tel: 079 523 4302 / Fax: 046 - 622 9715).
Postal address: Geology Department, Rhodes University, P.O. Box 94, Grahamstown 6140.

Front cover: [Left] Thanks to Francis Thackeray (Transvaal Museum) for providing this unusual picture: the virtual brain (endocast) of Mrs (Master) Ples, based on CT scans undertaken by Francis Thackeray and Jose Braga (Paul Sabatier University, Toulouse, France). An asymmetry on the left side of the brain is indicative of an incipient "B"

Mrs Ples is 2.15 million years old.

EDITORIAL

Dear Friends and Members of the PSSA,

After a slow start, the contributions for this issue just rolled in! It was great to hear from so many of you – thanks so much for making the effort. Many thanks are also due to Billy de Klerk for his role in putting together the previous issue while I was on maternity leave.

In this issue we have, among other things, an abundance of news from our overseas colleagues, an unusual proliferation of palaeobotanical input, lots of Permian/Triassic transition research, plenty of dinosaur-related activity, and Anusuya Chinsamy and John Long have been busy publishing glossy books. Something that should not be overlooked, as Heidi Fourie pointed out, is that this year marks the centenary of the Annals of the Transvaal Museum – certainly an anniversary worth noting.

It is hard to believe that nearly two years have passed since the PSSA congress was held here in Grahamstown. The forthcoming congress, to be held this September, in the quaint and beautiful, one-horse-town of Matjiesfontein, lies in the capable hands of the Cape Town crowd. It will no doubt be as cosy and friendly an event as we have all come to expect from these gatherings. For more information on the congress see p. 5.

This congress marks the 20th anniversary of the declaration of Graaff Reinet as the capital of Gondwanaland. For those newer members who have been in the dark about the status of the little Karoo town (and who would probably find Francis Thackeray's behaviour as outlined on page 21 rather eccentric), I have reproduced an article from the Palnews archives that was written by Francis after the 5th PSSA congress, held 20 years ago in Graaff Reinet (see p. 8). It explains everything...

While browsing through old issues of Palnews, I came across the announcement for the first PSSA congress ever to be held. The year was 1979, the venue the National Museum in

Bloemfontein. Included in the announcement, was an outline of the costs involved in attending the congress. The ravages of 30 years of inflation are painfully apparent!

Early registration fees were a hefty R10, as was the charge for the day excursion. Recommended accommodation ranged from the exclusive Bloemfontein Hotel at a pricey R22 (with bath) per person per night, to the budget Oranje Hotel at R9 (with bath) or R8 (without a bath) per person per night.

Amazingly, the museum was able to cater the reception, lunches and teas free of charge – would any museum in South African be able/willing to make the same offer today? The PSSA was able to sponsor the congress dinner for all members, although they did charge a whopping R7.50 each for accompanying spouses...

I wonder what a university lecturer was earning back in 1979? Any suggestions from our more experienced members? Speaking of whom, there were 67 members of the PSSA in 1979, and 21 of them are still loyal members today. In the conference photo below, there are many faces that are familiar even to the newer PSSA members. Of the 67 members in 1979, only 4 were not South African residents. Currently we have 117 members, and 38 live outside of South Africa (including at least 10 South African emigrants). This means that the number of international members has increased from 6% thirty years ago, to nearly a third today. Perhaps this is a reflection on the closer connection we have to the international academic community today – surely one of the more positive outcomes of globalisation.

For those of you lucky enough to go to Matjiesfontein in September, I hope you have an excellent congress!

Wishing you all a happy and productive second half of the year,
Rose

FIRST PSSA CONFERENCE

NATIONAL MUSEUM
BLOEMFONTEIN JULY 1979



EERSTE PVSA KONFERENSIE

NASIONALE MUSEUM
BLOEMFONTEIN JULIE 1979



Front Row: Prof. Jim Hopson, Prof. Mike Raath, Dr Herbert Klinger, Dr & Mrs Bob Brain, Hannes Oberholzer, Dr James Kitching

Middle: Dr Norton Hiller, Miss Mary-Ann van den Nieuwenhof, Juri van den Heever, Miss Giselle Troskie, Miss Nadine Troskie, Miss Heidi Jacobs, Mrs Imogen Chesselet, Dr Eva Kovács-Endrődy, Johan Looock, Dr Elisabeth Vrba, Dr Chris Gow

Back Row: Dr Jacques van Heerden, Fred Grine, Miss Beth Peterson, Andrew Hauser, Colin MacRae, Dr André Keyser, Dr A S Brink, Burger Oulofsen, Dr Eddie van Dyk



Palaeontological Society of Southern Africa

3rd CIRCULAR – PSSA'08

CONFERENCE INFORMATION & REMINDER

FINAL CALL FOR ABSTRACTS

June 2008

Dear Colleague

The 15th Biennial Conference of the PSSA will be held this coming September at the **Lord Milner Hotel, Matjiesfontein** on the southwestern margin of the Great Karoo.

The conference will run from the evening of **Thursday 11th September** to the afternoon of **Sunday 14th September 2008**, followed by a two-day field excursion on **Monday 11th** and **Tuesday 12th September, 2008**.

This circular serves as a reminder for prospective participants to (1) **register**, (2) **pay their conference fees** and (3) **submit abstracts** for papers and posters they plan to present at the conference by **15th July 2008**.

Accommodation for some 70 people has been reserved by PSSA at the Lord Milner Hotel. **Participants will need to make their own bookings directly with the hotel** (see below).

Call for papers and posters

Please send in abstracts of any papers and/or posters that you wish to present at the conference as soon as possible. Contributions on any aspect of palaeontology are welcome. We intend to compile a volume of **extended abstracts** (effectively short papers, with illustrations and full references) for the conference, covering a wide spectrum of southern African palaeontology. These extended abstracts will subsequently be published in *Palaeontologia africana*. **Review papers** are especially welcome, including from research students. The idea is that a succinct, well-referenced review, highlighting recent key advances, is often of more value for the palaeontological community as a whole than narrowly focussed research papers that can be published in specialist journals. Obviously, these extended abstracts will need to be planned, written and submitted well in advance.

Abstracts must be submitted by email or on disc, to arrive no later than **15th July 2008**, to **Roger Smith**, Iziko SA Museum, PO Box 61, Cape town 8000, RSA (rsmith@iziko.org.za; 021-481 3879).

Abstracts that summarise palaeontological material rather than outline a proposed talk are much preferred. As far as possible they should follow manuscript guidelines for *Palaeontologia africana* (Times Roman 12 point, double line spacing, 25mm margins). They should include a brief title and name of authors with affiliations and addresses (including email addresses). Abstracts should preferably be designed to fill one to four (maximum) full printed pages in *Palaeontologia africana*, including references and illustrations (please ensure adequate resolution for all graphics – minimum 300dpi).

Registration & payment of fees

1. **Conference fees** should be paid directly into the PSSA bank account:

Palaeontological Society of Southern Africa
Bank: ABSA
Branch: Maitland St, Bloemfontein
Branch code: 632005
Cheque Account number: 4048129240

PLEASE state clearly on the deposit slip that your payment is for PSSA'08 to avoid possible confusion with membership fees. Please bring proof of payment of fees with you to the conference.

Fees for the PSSA'08 conference are:

**Members R800
Students R300.**

The conference fee covers:

1. Conference materials
2. Ice-breaker reception (Thursday pm)
3. Lunches and teas (Friday-Sunday)
4. Dinner on Friday (*al fresco*), Saturday (hotel; drinks at own cost), and Sunday (Biennial Conference Dinner, Hotel).

Please note that the conference fees for ordinary, if hardly normal, members have been increased from the R750 per head announced in the previous circular. This is to cover some of the cost of the Biennial Conference Dinner (normally charged extra) which we hope will be attended by as many members as possible.

2. Please complete in full the **registration form** attached separately and submit this by email to **Roger Smith** (rsmith@iziko.org.za; 021-481 3879) by **15th July 2008**.

Accommodation

Most delegates will be accommodated at the **Lord Milner Hotel, Matjiesfontein Village, Western Cape, Postal Code 6901, RSA** (R300 pp sharing, R330 single, bed & breakfast).

Please make your own reservations in good time directly with the hotel (tel: 023-561 3011; fax: 023-561 3020; e-mail: milner2@mweb.co.za). You will be responsible for settling your own bills on departure.

A **very limited** number of places are available **for students only** in shared, self-catering guest cottages on the **Rietfontein Private Nature Reserve** (R180 pp, bed only). The cottages are situated right next to Matjiesfontein Village and only ten minutes' walk from the conference venue. Please contact **John Almond** (naturaviva@universe.co.za; 021-462 3622) concerning student accommodation.

Field Excursion: Great & Little Karoo

A two-day, fully-catered field excursion along a scenically spectacular route that straddles the Great and Little Karoo is planned for **Monday 15 and Tuesday 16 September 2008**. Participants will have the opportunity to see a wide range of remarkable rocks and even a few fossils, from the Ediacaran Cango Caves Group through the Ordovician to Early Carboniferous Cape Supergroup, the Permian Karoo Supergroup, the Jurassic to Cretaceous Uitenhage Group, and fossiliferous late Cenozoic "drift".

Shared accommodation (1 night) will be at the **Red Stone Hills Guest Farm** near Calitzdorp which has a geologically splendid setting (tel: 044-213 3783; email: redstone@pixie.co.za; www.redstone.co.za). We will make the necessary bookings for you once we have received your fees and registration forms. The programme will end late on Tuesday afternoon (c. 17h00) north of Klaarstroom along the southern margin of the Great Karoo with easy access to the N1.

The excursion fee is **R600 per person** (*own* transport), payable in advance to PSSA together with the conference fees. This fee covers the excursion guidebook, *shared* accommodation and all meals (2 lunches, 1 dinner, 1 breakfast, tea & coffee *en route*) but *not* alcoholic drinks. There is an R80 supplement for single accommodation for those that require it (in which case, please specify in advance).

Outline programme for PSSA'08 Conference, Matjiesfontein

| | | |
|--------------------------------|---------|---|
| Thursday | 11 Sept | Registration (from 16h30) and ice-breaker (from 19h00) |
| Friday | 12 Sept | Late registration (from 08h30), opening, scientific sessions. Evening: dinner at the Lord Milner Hotel |
| Saturday | 13 Sept | Scientific and poster sessions Short afternoon excursion IF time permits Evening: <i>al fresco</i> dinner in Karoo veld |
| Sunday | 14 Sept | Scientific sessions and society BGM Evening: Conference Dinner at the Lord Milner Hotel |
| Monday 15 & Tuesday 16 Sept | | Post-conference field excursion to the Great and Little Karoo (1 night at Red Stone Hills Guest farm, Calitzdorp). |

For any additional information please contact::

John Almond (naturaviva@universe.co.za; 021-462 3622)

Roger Smith (rsmith@iziko.org.za; 021-481 3879)

Thalassa Matthews (tmatthews@iziko.org.za; 021-481 3877).





Palaeontological Society of Southern Africa

Conference Registration Form– PSSA'08

Please email the completed registration form BY 15 JULY to:

Roger Smith (rsmith@iziko.org.za; 021-462 3622)

| | | |
|---|-----------------------------------|--------|
| NAME: | | TITLE: |
| AFFILIATION: | | |
| ADDRESS: | TEL: | |
| | CELL: | |
| | FAX: | |
| | EMAIL: | |
| MEMBERSHIP (ordinary / student): Conference fees R800 (Ordinary Member), R300 (Student Member) | | |
| BRIEF TITLE OF PAPER(S): | | |
| BRIEF TITLE OF POSTER(S): | | |
| BIENNIAL CONFERENCE DINNER (Yes/No): Sunday 14 September (Included in fees) | Any special dietary requirements? | |
| POST-CONFERENCE EXCURSION Monday 15 – Tuesday 16 Sept. (R600 pp) (Yes/No): | Single supplement? (R80 pp) | |
| TOTAL FEES PAID: | Date of payment: | |
| ANY SPECIAL NEEDS: | | |



FROM THE ARCHIVES

Re-unification of Gondwanaland Sediments in Graaff-Reinet, Capital of Gondwanaland

Shortly before the Fifth Biennial Conference of the PSSA, a small brown envelope reached the British Consulate's Office in Cape Town. In bold black letters it bore the caption 'On her Britannic Majesty's Service'. Addressed to the Palaeontological Society of Southern Africa, it contained a sediment sample from Mount William, East Falkland.

At about the same time, Burger Oelofsen, Jurie van den Heever and Le Fras Mouton were instrumental in recovering a particular sample from South America, notably from deposits associated with *Mesosaurus* in Brazil. The same deposits correspond to the 'White Band' in South Africa where *Mesosaurus* has also been found.

Meanwhile, James Kitching had sent to PSSA headquarters a number of samples which he had collected during his visit to Antarctica in 1969 (for more details, see article entitled 'Lystrosaurus Zone (Triassic) Fauna from Antarctica', by Kitching, Collinson, Elliot and Colbert (1972), published in *Science*, 175:524-7). James' donation to the PSSA included:

- 1 A Devonian sandstone sample from the Lower Beacon Supergroup, Darwin Mountains, Victorialand, Antarctica. Trilobite trackways had been found on the block from which the sample was taken.
- 2 A Permian rock sample from the Buckley Formation (c.f. South African Eccia), Mt. Kenyon, McGregor Glacier, Antarctica. The specimen was associated with *Glossopteris* leaves.
- 3 A Triassic sample from the Fella Formation, Collinson Ridge, McGregor Glacier, Antarctica. The specimen was associated with well preserved *Dicroidium* leaves.

In mid-1988 Roger Smith and James Kitching collected a number of samples from various parts of the Karoo. These included sediments from the 'Eodicynodon Assemblage Zone' from the Laingsburg Formation (Eccia Group); the *Dicynodon lacerticeps* Assemblage Zone from Wilgerbosch; and a sample from the *Lystrosaurus* Zone at the base of the Katberg Formation (collected from the Lootsberg Pass).

Just before the PSSA Conference in Graaff-Reinet, Colin MacRae collected sediment samples from Australian Permian deposits (complete with spores), and Anusuya (Chinsamy) Moodley obtained an Indian sample.

Although these samples relate to different places and different time intervals, they have one thing in common: they all come from what was once the Great Continent of Gondwanaland. And on the occasion of the Fifth Biennial Meeting of the PSSA in September 1988, in the town of Graaff-Reinet in the Karoo, these parts of Gondwanaland were ceremonially re-united. They were placed together in a transparent jar that has now become a Staff of Office for successive Presidents of the Society. A label on the container reads as follows:

'The sediments and rocks contained in this Jar were formerly once part of the Great Continent called Gondwanaland. Since the break-up of Gondwanaland, they have been separated for many millennia. However, samples collected from Antarctica, Australia, India, South America, the Falkland Islands, and from the Karoo in South Africa, all once part of Great Gondwanaland, have been re-united in this container, and henceforth shall be passed on from one President of the PSSA to another'.

After ceremonially handing this Staff of Office over to James Kitching (incoming President for the 1988-1990 term), Jurie van den Heever read out a Declaration, proclaiming Graaff-Reinet the Capital of Gondwanaland. This Proclamation has been recorded in the form of an illuminated Scroll. James Kitching's first task as President of the PSSA was to sign the Scroll before it was presented to His Worship, Mr Angus Knott-Craig, Mayor of Graaff-Reinet.

The organising Committee of the PSSA Conference extend their thanks to all persons who kindly assisted with the collection of Gondwanaland sediment samples. Special thanks are also extended to Jacqui Blaeske of the South African Museum, who kindly drew up the scroll which declares Graaff-Reinet the Capital of Gondwanaland.

Francis Thackeray
Palnews vol. 6(1); 1988

ALBANY MUSEUM AND RHODES UNIVERSITY - Grahamstown

Billy de Klerk

Once again the first half of this year has been a busy one at the Albany Museum. A now regular event at the start of the Rhodes academic year is that I conduct two weekend Karoo field excursions for post-graduate Rhodes University and Leeds University students in Zoology. These excursions are a delightful diversion from the daily museum routine and they serve as an opportunity for staff and students to "bond" for the looming year ahead. In addition the outings serve to broaden their zoological horizons so to speak. I twice had opportunities to do some Karoo fossil collecting earlier in the year. Collecting of fossils in the *Cistecephalus* Biozone was carried out on the farm "Libertas" - the neighboring farm to the south of "Asante Sana" where the dicynodont trackway occurs. Good outcrop was evident on this property and further collecting will be undertaken. In mid March I was also fortunate to again join Prof. Bruce Rubidge (BPI, Wits) and his field team in the Klipplaat/Jansenville area. The main intention of this field work was to excavate a large therocephalian that had been discovered in early 2007 and in addition a number of small dicynodonts were collected.

Over the past six months I have also been involved in advising a task team from the Addo Elephant National Park in designing some of the displays that will be featured at a new interpretive education display centre at their main campsite.

This tourism and education centre will be established to highlight and display the natural history of the park and, in particular, to provide a focus on the evolution of the elephants. Part of the display will also feature the palaeontology of the sediments underlying the park footprint. This includes fossils recovered from the terrestrial Kirkwood Formation and the shallow marine and estuarine Sundays River Formation. Apart from

representative fossils being displayed, they have commissioned an artist to paint two large scenes depicting the early Cretaceous environments during the deposition of these units and also two model reconstructions of dinosaurs.

In the last issue of Palnews I reported that after a visit by Prof. Paul Sereno in Nov 2007 a collaborative project with Prof. Cathy Forster and myself was initiated to fully describe the Kirkwood dinosaur *Nqwebasaurus* (Kirky) and if necessary revise the taxonomic position of this small theropod dinosaur. It was therefore a double delight to welcome Prof. Cathy Forster and one of her PhD students, Jonah Choiniere of "The George Washington University" in Washington DC, US to the Eastern Cape for 11 days in mid June.



Cathy Forster hard at work in the Albany Museum

The objective of their research visit was twofold: firstly to do an in-depth review of the taxonomy of the small dinosaur *Nqwebasaurus* (Kirky). As Jonah Choiniere was studying small theropod dinosaurs from China it was felt that he was well suited to take the lead in reviewing our Kirkwood dinosaur under the supervision of Prof. Forster. During this time I attempted further preparation on this delicate fossil and we were fortunate to expose

some very small teeth that were unknown before. Secondly - Prof. Forster and I sorted all the baby ornithopod dinosaur fossils that had been collected from the Kirkwood Cliffs quarry site over the past eight years with a view to describing a new species of dinosaur. This project is well on track and we hope to have a new species and accompanying manuscript ready for publication by early 2009. I have also continued with the preparation of two large Kirkwood sauropod cervical vertebrae and I have a third in the wings. Early indications are that these cervicals may well be from a *Dicraeosaurus*-like sauropod. In addition I have at least two more ready for excavation from the Kirkwood beds. All I now need are some sturdy student volunteers to help with the excavation, as it's not going to be easy. Enough to keep me busy for a while.....

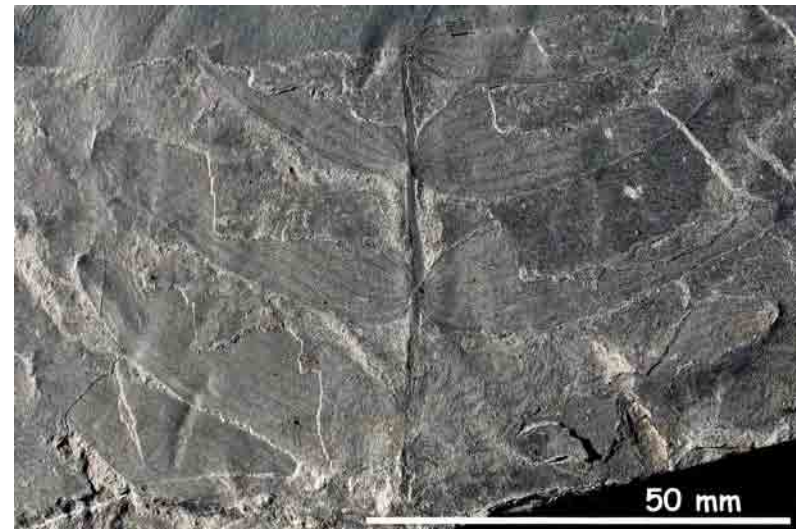
Till next time - Billy



Cathy Forster and Jonah Choiniere when we were working on the Cretaceous fossils while based at a very chilly Asante Sana

Rose Prevec

In July last year, a large Rose waddled about in the field with colleagues Johann Neveling (Council for Geosciences, Pretoria), Bob Gastaldo (Colby College, USA) and two of Bob's students, in a continuing investigation of the Permian Triassic transition, as reflected by the fossil floras and geology of the southern and south-eastern Karoo Basin. There have been some exciting developments, which will be submitted for publication later this year.



Schizoneura gondwanensis from Somkhele coal mine

In August, an even larger and grumpier Rose travelled to Somkhele coal mine in KwaZulu-Natal with Dr Emese Bordy (Rhodes University). They had hoped that the excavations at the new mine, near St Lucia, would provide an opportunity to search for coal associated floras of the Emakwezini Formation, and they were not disappointed! They found a fascinating new flora, including several species of *Glossopteris*, the striking sphenopsid *Schizoneura gondwanensis* and a brand new glossopterid fructification.

Working in the oppressive heat of a busy and dusty open cast pit was an adventure, and Rose was more agile than she looked when called upon to dodge the enormous trucks and earth-moving equipment. Thanks to a kindly mining contractor and his bakkie, 11 boxes of palaeontological treasures made it back to the BPI, and thanks to Bruce Rubidge, down to the Albany Museum where they await careful examination.



Open cast mining operation at Somkhele coal mine near St Lucia

Rose also ran a first year Botany plant diversity at Rhodes University, gaining some valuable lecturing experience, although marking 96 exam scripts later with a two week old baby was not a joy.

Rose has been lying low for a while, settling into motherhood and getting to know her bouncing baby boy, Roman, who was born in October. She started another postdoc at Rhodes this year, funded by Bruce Rubidge's Karoo Research grant from the NRF African Origins Platform.

Work on glossopterid fructifications is ongoing, including a collaboration with Steve McLoughlin (Swedish Museum of Natural History, Stockholm) and Roberto Iannuzzi (UFRGS, Porto Alegre, Brazil) to revise the genus *Arberia*.

Publications

Prevec, R., Bamford, M. and McLoughlin, S. 2008. Novel double wing morphology revealed in a South African ovuliferous glossopterid fructification: *Bifariaia intermittens* (Plumstead 1958) comb. nov. Review of Palaeobotany and Palynology 150:22-36.

Bordy, E. & Prevec, R. 2008. Emakwezini Formation [Beaufort Group] [Permian]. Catalogue of South African Lithostratigraphic Units.



BERNARD PRICE INSTITUTE FOR PALAEONTOLOGY

WITS UNIVERSITY, JOHANNESBURG

Lucinda Backwell

Lucinda Backwell and Francesco d'Errico had their paper on bone tools from the early hominid site of Drimolen accepted in June. Fourteen pieces, dated ~ 1.5 to 2 Mya, bear a pattern comparable to one previously described on early hominid

bone tools from Sterkfontein and Swartkrans. This suggests Drimolen bone tools were involved in a similar, if not exactly the same, task. Other common features include favoured bone types, fracture patterns, and the length and position of the worn area. This research was presented at the Microscopy Society of Southern Africa meeting held in Botswana in June.

In February we visited the Wonderkrater spring and peat mound site twice; the first time to shore up the walls of the excavation in the centre of the mound (Figure 1), and the second time to take samples for Radiocarbon and Optically Stimulated Luminescence dating (Figure 2). Geological cores show the MSA white sand horizon at 3 m below the surface to be the first of many MSA levels recorded at the site.



Figure 1. Shoring operations in the centre of the Wonderkrater peat mound.

In March we retrieved the last of the bones inserted into termite mounds a year ago. They form part of a 'termite modification of bone' experiment that looks at seasonal activity, and modification of different types of bone in various stages of preservation.



Figure 2. Michel Lamothe (University of Montreal) taking samples for OSL dating.

In April we conducted our fourth field trip to Heelbo, the mid-Holocene large mammal mass death assemblage in the Free State. We opened the remaining 4 m² of bone exposed in the donga wall, and lifted the first two layers (Figure 3). Numerous complete and sometimes articulated bones show no surface modifications (Figure 4). The catastrophic age profile and mixed stages of preservation appear unchanged between layers, suggesting the same cause of death, which we hypothesise was starvation caused by drought. We also collected data for our longitudinal studies on large and medium-size mammals, including skeletal modification, disarticulation and dispersal patterns in a semi-arid environment.

The past few months have been spent teaching human evolution to a first year geology class, and taphonomy to Honours students. Spare time has been dedicated to writing an announcement paper on Wonderkrater, submitting excavation reports to SAHRA, and studying the cuticular scale patterns on modern hairs, following the recent discovery of fossil hair in *hyaena* coprolites.



Figure 3. Uncovering the second of four bone horizons at Heelbo.



Figure 4. Partially articulated wildebeest limb bones from layer 2 at Heelbo.

Recent publications

Backwell, L. & d'Errico, F. 2008. Early hominid bone tools from Drimolen. *Journal of Archaeological Science*. In press.

Backwell, L.R. and d'Errico, F. 2008. Multifocus microscopy confirms bone tool utilisation by early hominids at Drimolen, South Africa.

Microscopy Society of Southern Africa, 46th Annual Conference. 21-25 June, University of Botswana.

Backwell, L.R., d'Errico, F. & Wadley, L. 2008. Middle Stone Age bone tools from the Howiesons Poort layers, Sibudu Cave, South Africa. *Journal of Archaeological Science*. 35/6: 1566-1580.

Rob Gess

Rob continues to penetrate ever deeper into the dark waters of Late Devonian vertebrate evolution and habitats, particularly as reflected in the fish of the Aghulas Sea, sheltering in the estuary near the recent settlement of Grahamstown. He's coming to terms with the concept that the vertebrates currently occupying the palaeo river system, which include most of the local academics, their pet canids and feathered canid food, are all specialised sarcopterygian fish, as the new school of phylogeneticists insists. He's still finding evidence of previously unnoticed inhabitants - of the Devonian lagoon that is. As yet none of them have fingers or toes, but he's holding thumbs.

COUNCIL FOR GEOSCIENCE, PRETORIA

Johann Neveling

Well my last contribution to PalNews was almost a year ago, so I will start my report back in June - July 2007 when I joined Rose Prevec (Rhodes University), Bob Gastaldo (Colby College) and two of his students, Kit Clarke and Sophie Newbury in the Free State and Eastern Cape. This was the last of a series of winter field seasons dating back to 2003. Between several snow storms we enjoyed several gorgeous days which we used to finalize our research on Late Permian and Triassic plant fossils and environments.

In October 2007 I joined Emese Bordy (Rhodes University) and Tebogo Segwabe (Botswana Geological Survey, Rhodes University) in Botswana, to see Tebogo's most important outcrop sections. Believe me we are very spoiled with the

extensive outcrops we are used to in South Africa. The larger project, which is investigating and comparing Karoo sequences in Botswana, Namibia and South Africa, has been strengthened by the recent addition of Valerie Nxumalo (CGS) who has enrolled for a MSc at Wits and BPI. Valerie will focus on intrabasinal variation within the southwestern corner of the Kalahari-Karoo Basin.

The last 7 - 8 months have been gobbled up by other duties, but I did manage to devote some time to the completion of old projects. During one of those long weekends in May John Hancox and I visited some of our old haunts in Senekal - i.e. Scully's pub, Driefontein and Guarriekop localities. I guess nobody will be surprised to hear that Driefontein is still yielding microfossil material to those willing to sift through tons (if you'll allow me such liberal use of artistic license) of surface scree. However we were pleasantly surprised to find a number of archosaur and amphibian fossils (in various states of disrepair) at the old Guarriekop locality. It just goes to show what a decade of erosion can uncover! These fossils now reside at the BPI, but served as a reminder that there is some unfinished business in the Free State.

On a sadder note Linde Karny recently retired from the CGS after almost 30 years of service. I doubt that there has ever been a more loyal and diligent employee at the CGS and her contribution to the curation of the CGS fossil collection over the last 5 years has been truly immense. We wish her a well-earned and enjoyable retirement.

I look forward to seeing old friends and colleagues at the Matjiesfontein PSSA!
Johann

GEOLOGICAL SURVEY, NAMIBIA

Helke Mocke

I have been working with a Geology Phd. student Anna Nguno on some interesting marine fossils we found in a diamond exploration trench in the Skeleton Coast Park of Namibia. We think that they might be Miocene in age and include seal and whale bones, shark teeth, crab material, fish spines and molluscs. We have also had the privilege of inviting John Pether to Namibia to help us identify some of the younger Plio-Pleistocene molluscs found in the terraces along the Skeleton Coast.

IZIKO SA MUSEUM, CAPE TOWN

Roger Smith

It seems that I have not reported back for at least a year- so I would like to give a brief update on what's been happening in Iziko South African Museum's department of Karoo Palaeontology. .

Research highlights

Permo - Triassic Boundary Project

The NRF funded "Anatomy of an Extinction" project has been drawn to a close with a short field trip to the Nieu Bethesda district to fill in some biostratigraphic data for the middle *Dicynodon* zone. The aim of this work is to look in detail at the change in environmental conditions and population dynamics before, in the run up to, and during, the end-Permian extinction event.

Of the more interesting specimens that popped up in this trip were a small rhinesuchid amphibian with some articulated skeleton (the rest I will have to go back and collect) and a complete millerettid skull plus lower jaw.

Over the past 2 years with the help of overseas collaborators and National Geographic funds, this project has spread out of the main Karoo Basin of South Africa into the east African rift basins of Tanzania and the northern sag basins developed around L'Aire massif of northern Niger. The main aim of these outreach projects is to see if the faunal and floral extinctions and subsequent recovery are similar and synchronous in the different tectonic and climatic settings of central Gondwana.

The Niger work (Sidor, Smith, Tabor, Steyer) has demonstrated some climate controlled endemism in the Late Permian where amphibian diversity is much greater and the reptile fauna is dominated by captorhinids. In 2006 I began an excavation of a multi specimen pareiasaur "graveyard" in the Arlit region as well as some detailed work on vertebrate tracks in end-point playa carbonates in the Moradi Formation. Unfortunately politics has now rendered the area out of bounds due to high-jackings by Toureg bandits. All this work is on hold for the time being and we hope to return in 2009.

It is much simpler and safer to do fieldwork in Tanzania, so over the past year we (Angielczyk, Sidor, Smith, Tsuji and Steyer) have made two trips to the Ruhuhu rift basin in southern Tanzania. The possible presence of a preserved P/T boundary section in the upper Usili strata on the slopes of Kingori mountain was my main target. This involved intensive collecting and logging of strata beneath the dramatic cliff-forming Kingori sandstone. With no drivable tracks to these outcrops we had to walk up to 12 km every day just to get to the outcrops. Nevertheless, we were rewarded with a number of interesting taxa- some new to the Tanzanian fauna and one or two possible new taxa including a dicynodont and a totally unexpected dinocephalian.



Sterling Nesbitt with the enormous gorgonopsian canine he found in the basal Usili Fm (Late Permian) of southern Tanzania.



Ken Angielczyk with a *Rhachiocephalus* pelvis from the Usili Fm (Late Permian) at Kingoria Mt southern Tanzania.

In the mid Triassic Manda beds we collected several pond deposits indicated initially by abundant spiral coprolites that on closer inspection hosted bonebed-type occurrences of a number of interesting taxa including a mystery armoured archosaurian, a primitive rausuchian and a non-dinosaurian basal dinosauriform, a beautiful complete *Scalenodon* (herbivorous cynodont) skull plus lower jaw and a large kannemeyeriform *Sangisaurus*-like skull.

All the specimens recovered from a total of 77 localities have been shipped back to Seattle and Chicago for preparation.

Early Triassic Recovery Project

This project is a 3 year AOP-funded investigation of the time interval immediately after the end-Permian extinction event and aims to reconstruct the timing and sequence of recovery of floral and faunal diversity in the South African Karoo Basin. This is a collaborative project with Jennifer Botha Brink of National Museum and has been running for couple of years already but is now focussed on using bone histology and quantitative taphonomy as indicators of climate/environmental changes and to help explain the apparent lack of Permian ancestors to some of the earliest Triassic taxa.

With these aims we spent 10 days in the earliest Triassic strata near Bethulie - continuing our detailed biostratigraphic collecting up from the boundary as well as a planimetric map of a single *Lystrosaurus* "graveyard" occurrence. Over an area measuring 700x120 m every in situ bone occurrence was mapped and taphonomically assessed in an effort to fully document the various taphonomic modes of these well known *Lystrosaurus*-abundant horizons. In the course of this work we recovered beautiful specimens of *Proterosuchus*, *Ictidosuchoides*, a number of cynodont skulls and skeletons and an interesting non-*Lystrosaurus* dicynodont from the boundary bed.



Possible cynodont burrow cast in Early Triassic Katberg Fm near Bethulie with interesting side chamber and scratch marks

Tracking Gondwanan Dinosaurs

This PAST- funded project in collaboration with Claudia Marsicano (Buenos Aires) and Jeff Wilson (Univ Michigan) has entered the consolidation phase- 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. They reacted to slipping on the wet sand surface in different ways and the theropod claw movements are a precursor to what was later to become a major innovation in the evolution of birds.

Other interesting tracks discovered in this study were those of a sauropod with paired manus/pes impressions, bird-like tracks, a probable amphibian track with belly drag, and a cheirotherium manus/pes pair which, according to current thinking, should not be around in the early Jurassic.

The sedimentological setting of the Moyeni tracks is a lower point bar and trackway preservation has been enhanced in parts by algal mats. This has been written up for *Palaaios*.

In August this year we intend to do some laser scanning to create a 3-D digital map of these tracks which should help to document the subtle topographic "highs" as well as the more easily recorded "lows" in the footprints.



Plaster cast of theropod dinosaur track on the Moyeni surface, southern Lesotho.

African Dinosaur display

Phase 1 of the new dinosaur gallery in Iziko SA Museum was launched by Prof. Paul Sereno (Univ Chicago) last November during his PAST-sponsored lecture tour of South Africa. He was especially pleased to see casts of some of his North African specimens on display in the new African Dinosaur skeleton hall and was able to give us a unique insight into how and where they were found. We currently have a

mounted skeleton of the juvenile sauropod *Jobaria* along with the skulls of supercroc *Sarchosuchus* and the enormous *Charcharodontosaurus*. By the middle of next year we plan to open Phase 2 with a mounted *Suchomimus* skeleton and 2 full sized dioramas of Elliot scenes with a couple of *Heterodontosaurus* on a termite mound and an egg-laying *Massospondylus* / *Syntarsus* interaction. African Dinosaur is funded by the Lottery Board of South Africa.

West Coast Fossil Park

Research on the Late Miocene to Recent ecosystems of the Cape West Coast was given a considerable boost late last year with the award of a major 3 year grant from DST's African Origins Platform. I am now head of the West Coast Fossil Park's research initiative with a team made up of geologists (John Compton, Dave Roberts), palaeontologists (Thalassa Matthews, Deano Stynder, Pippa Haarhoff), palaeoanthropologist (Becky Ackermann), educationalists (tender to be finalised), administrative (Hamish Robertson) and tourism experts. Several student bursaries have been allocated already and a number of technical assistants hired to help with the sorting microfauna.

Thalassa Matthews has taken over the day-to-day management of the project and will be pushing the newly-hired educationalist to get the web site set up as soon as possible.

Deano Stynder is currently excavating inside the so called "Discovery Tunnel"- a horticultural tent over the site where Brett Hendey dug his first trenches into the Sivathere-dominated bonebed back in 1976.

Dave Roberts has championed a student from Birmingham University to take up a postdoctoral bursary to conduct OSL thermoluminescence dating on the Langebaan Formation. These strata overlie the phosphatic Varswater Fm which hosts the main dig site, and are probably around 2 million years old. They too are fossiliferous and good dates will give us a better idea about the sea level movements in that time frame.

Educational activities

Friends of the Museum field excursions - 2 week-long excursions for 30 people to Beaufort West and Three Sisters area.

Documentaries - a History Channel documentary on climate change with Mike Benton in Lootsberg and a Discovery Channel one on the End Permian extinction at Bethulie.

Cedarberg Retreats- part of Iziko's Summer School run in February each year; myself and a small team of researchers take 30 people into the Cedarberg mountains for 4 days of rocks, fossils, birds, insects and rock art.

Preparators workshop- Feb. 2007 our lab hosted a 4 day fossil prep workshop for 20 participants from around the country - run by 2 invited experts from the Natural History Museum London

Teachers workshop- Gave lecture and distributed CD of lecture to help teachers teach Evolution.

Recent publications

Smith, R.M.H., Marsicano, C.A. and Wilson, J.A. (in prep). Sedimentology and Paleocology of a Diverse Early Jurassic Tetrapod Tracksite in Lesotho, Southern Africa. *Palaios*

Wilson, J.A., Marsicano, C.A. and Smith, R.M.H. (in prep) Slope- and slip-induced locomotor adjustments in two early dinosaur trackmakers from southern Africa. *Science*.

Smith, R. M. H. and Haerhof, P. (in prep) Sedimentology and taphonomy of an Early Pliocene sivathere bonebed at Langebaanweg, Cape Province, South Africa. *Palaios*.

Abdala, F. and Smith, R.M.H. (submitted) Gondwanan Middle Triassic cynodonts and the Namibian connection. *Journal Vertebrate Palaeontology*
Butler, R.J., Smith, R.M.H. and Norman, D.B. 2007. A primitive ornithischian dinosaur from the Late Triassic of South Africa, and the early evolution and diversification of Ornithischia. *Proc. R. Soc. B*: 2021-2046.

Sidor, C.A. and Smith, R.M.H. 2007. A second burnetiamorph from the upper Permian Teekloof formation of South Africa *Journal Vertebrate Palaeontology* 27(2): 420-430

Botha, J. and Smith, R.M.H. 2007. *Lystrosaurus* species composition across the Permian/Triassic boundary of South Africa. *Lethaia* 40:125-137.

Botha, J., Modesto, S., and Smith, R.M.H. 2007. Extended procolophonoid survivorship after the end-Permian extinction. *South African Journal of Science* 48:54-56.

NATIONAL MUSEUM, BLOEMFONTEIN

Jennifer Botha-Brink

After spending copious amounts of time writing grant proposals last year (we all know how much fun that is), I managed to secure funding for several pieces of thin sectioning equipment so that I may now continue with my bone histology research. The last six months have been quite hectic arranging for the purchase of the equipment and learning how to use it all, but I am finally up and running!

I attended the 67th annual SVP meeting in October 2007 in Austin, Texas, which was educational and fascinating as usual. I presented a paper on the work I have been doing with Sean Modesto, from the University of Cape Breton, Canada on a varanopid aggregation from the *Tapinocephalus* Assemblage Zone near Fraserburg. In November, Sean and Darla Zelenitsky from the University of Calgary, Canada joined me in the field where we returned to some of our Early Triassic sites. In February 2008, I spent a week in Cape Town in a phylogenetics workshop where Pablo Goloboff trained a group of us in the cladistics program TNT. In March, a postgraduate student, Dewald du Plessis, joined me from the University of the Free State to begin his MSc on cynodonts using CT scanning and in May my team and I joined Roger Smith in the field in Bethulie to examine the taphonomy of the Early Triassic site at Fairylee. We collected some interesting fossils and have begun the process of preparation. Sean Modesto and I have at last finished and submitted the detailed description of the varanopid aggregation as well as a description of new archosauromorph material from the Triassic Katberg Formation. With the acquisition of my new thin sectioning equipment, I have begun some new bone histology projects, one of which includes the bone histological analysis of Permo-Triassic anomodonts. Sean and I must still finish a description of the Early

Triassic therocephalian we found last year as well as the burrow material mentioned in my last Palnews contribution, but I keep getting side tracked with bone histology projects! At least I can't say I'm bored!

Recent publications

- Botha-Brink, J. and F. Abdala. 2008. A new cynodont record from the *Tropidostoma* Assemblage Zone of the Beaufort Group: implications for the early diversity of cynodonts in South Africa. *Palaeontologia Africana* 43: 1-6.
- Botha-Brink, J. and S. Modesto. 2007. A mixed-age classed 'pelycosaur' aggregation from South Africa: earliest evidence of parental care in amniotes? *Proceedings of the Royal Society of London B* 274: 2829-2834.
- Botha, J. and K. Angielczyk. 2007. An integrative approach to distinguishing the Late Permian dicynodont species *Oudenodon bainii* and *Tropidostoma microtrema* (Therapsida: Anomodontia). *Palaeontology*. 50(5): 1175-1209.
- Botha, J. and T. Gaudin. 2007. An early Pliocene pangolin (Mammalia: Pholidota) from Langebaanweg, South Africa. *Journal of Vertebrate Paleontology*. 27(2): 484-491.

Popular

- Botha-Brink, J. 2007. Survivor of the most catastrophic extinction. *The Voyage of the Planet Magazine* pp. 8-17.

PEACE PARKS FOUNDATION, LESOTHO

Gideon Groenewald

The Maloti-Drakensberg Transfrontier Conservation Project between Lesotho and South Africa is slowly winding down and the first phase will end in December 2008. Although the definition of "Culture" included palaeontology, this field still needs a lot of inputs in Lesotho.

I was lucky to come across some very nice tracks of dinosaurs the other day. The trackway is preserved in the Molteno Sandstone and I am surprised at some of the detail that is preserved. I must say the tracks are best defined very late in the afternoon - showing that the lack of light is not always a bad thing???



SANBI, Pretoria

Palaeobotany in the Molteno Room, Jan-July 2008

John M Anderson, Pretoria, 13 July 2008

This has been an especially eventful half-year in and around the palaeobotanical front at SANBI (South African National Biodiversity Institute; formerly NBI, the National Botanical Institute).

Dr John M. Anderson

After 33 years at SANBI, I 'officially' retired (at 65) from the institute at the end of June, but will be continuing on our 'Molteno Palaeoflora' and 'Gondwana Alive' projects without any obvious break—other than now enjoying the freedom to choose where to spend any particular day working.

Molteno Palaeoflora: working together with Heidi on the fern and sphenophyte volumes.

Earth Alive Strategies: involving 101 strategies towards stemming the 6th Extinction and global warming; a slim booklet

of the strategies was published in May (see also below).

Africa Alive Corridors: involving 21 corridors (sinuous strips of territory some 2-5,000 km long and 50 km wide) each linking some 20 prime heritage nodes. Each corridor tells uniquely well a chapter in Africa's 4-billion year story—geological, biological or cultural. Together they relate the biography of the continent. This and the 'Strategies' project are closely interrelated and are being done in partnership with AEON of UCT (Maarten de Wit), the Council for Geoscience, DST, Peace Parks and others.

A card game incorporating the 'Earth' and 'Africa Alive' projects was premiered at the IYPE launch in Arusha, Tanzania, in early May—with 20 top South African and Tanzanian scholars playing.

Dr Heidi M. Anderson

Retired several years back from SANBI, Heidi (now married to Keith Holmes) lives in Dorrigo, New South Wales, in close proximity to a wet-forest UNESCO World Heritage Site.

Heidi has been visiting the institute for extended periods once or twice a year for the past few years. She has been occupied here (2 long trips in 2008), as first author, on the following two volumes.

Molteno Ferns: Published, in SANBI's *Strelitzia* monograph series, June 2008; this volume of 259 pages includes coverage of the 16 genera and 37 species of ferns (including 7 genera and 18 species of fertile material) observed in the Molteno.

Molteno Sphenophytes (horsetails): This volume is now well advanced and will hopefully appear next year (likewise in the *Strelitzia* series). It will be of about the same length as the fern counterpart, and covers 8 genera and 23 species of infertile material and another 3 genera and 8 species that are fertile.

A further two or three volumes, completing the flora (and paleoecology), are in preparation.

Dr Conrad Labandeira

Chairman, Palaeobiology, Smithsonian Natural History Museum, Washington, USA.

Conrad has been visiting SANBI now for some seven years, usually for two periods each year of around three weeks. He was here again in January and June of 2008; and as always, life changes quite dramatically when he is around. Firstly, Conrad has this virtually unfaltering habit of putting in 13-hour working days, seven days a week; and secondly, thank goodness, he enjoys play—with words—during the few waking hours remaining.

Molteno plant-insect interactions: For most of these past seven years, Conrad has been data-basing the Molteno collection (some 30,000 slabs from 106 localities) with regard to the insect damage (mining, margin feeding, galling etc) witnessed on the diverse flora. He has now identified and entered every recognisable plant specimen (over 177,000 items) on the front and back of every slab. It is a uniquely bulky database and Conrad is now into the phase of the project where he can start sketching the wide spectrum of damage types on the still wider spectrum of plant host species; and teasing out the paleoecological patterns from the mass of information.

Dr Shreerup Goswami

Lecturer, Post Graduate Department of Environmental Sciences, Fakir Mohan University, Vyasa Vihar, Balasore-756019, State Orissa, India.

Shreerup arrived in South Africa on 1 April 2008 for a one-year research break in South Africa. Negotiations for his trip started about a year earlier, and I must admit that until we saw him standing there at the Oliver Tambo Airport, I was uncertain whether the whole visit might be an intricately devised and long-concealed April Fools joke. It is really good having Shreerup here opening a window onto his entirely different world—with

not too much in common other than a rich *Glossopteris* flora and the devotion to cricket.

The research purpose of Shreerup's visit is diverse and broadly threefold:

Plant biodiversity: as preserved in the glossopterids of the Indian Permian.

Climate change: at all levels of geological resolution relating to our 21 African Corridors (see above).

Pollution impact: Shreerup is preparing an intriguingly idiosyncratic series of semi-popular articles ranging from 'Idol immersion pollution' to 'Marriage pollution', 'Election pollution' and 'Electro-magnetic pollution'—the first three being peculiarly Indian problems, the last being global.

TRANSVAAL MUSEUM

Francis Thackeray

In May, Francis Thackeray trekked through the Himalaya, and collected sand and pebbles from the vicinity where Gondwana interacted with Laurasia about 70 million years

ago. At the next PSSA conference, Francis will present a sample of these sands and rocks to the President for the PSSA Presidential Staff of Office, which includes Pangaeon rocks from Gondwana as well as Laurasia.

Francis had a wonderful time. In Kathmandu he met the Director of the Natural History Museum, to whom a replica of Mrs Ples was given.



Bob Brain

My search for microfossils of ancestral animals in Neoproterozoic limestones of Namibia continues, despite the fact that it has tended to be a very labour-intensive operation and is therefore rather slow. It is currently focused on *Otavia* fossils, which appear to represent fossil sponges, and the intention is to have a formal description published shortly. I have found them in a long stratigraphic sequence of limestones, ranging from the Ombambo Subgroup of the Otavi Group in the Kaokoveld, dating to about 750 million years, below the older of the two 'snowball earth' glacials, the Chuos, then through the stratigraphic span between this and the younger Ghaub glacial, about 635 million years old, and on into limestones of the Nama Group (Mara Member, Kuibis Subgroup) dating to about 548 million years. The precise stratigraphic details of these fossiliferous limestones have been studied by my collaborators, Tony Prave of St Andrews University in Scotland and Charlie Hoffmann of the Namibian Geological Survey in Windhoek, while stable isotope analyses of the carbonate rocks have been done on 260 samples by Tony Fallick at the Scottish Universities Environmental Research Centre in Glasgow.

When our formal description of *Otavia antiqua* was recently submitted for publication, reviewers advised that more information be obtained on the internal structure of these fossils than has thus far been provided by SEM images and petrographic thin-sections. So, the assistance of other specialists has been sought. Donald Herd, who runs the Electron Microscope Unit at St Andrews University has recently been obtaining exceptional back-scatter and cathode luminescence images of *Otavia* fossils, while at Albertay University in Dundee, Scotland, Iain Young and Craig Sturrock have used their High resolution X-ray computer tomography (CT) apparatus to produce images of structural detail. During the last year, I have been to Scotland twice to personally learn something of

these sophisticated technologies. While in Edinburgh, I had the pleasure of discussing the *Otavia* interpretation with Rachel Wood, the world specialist on fossil sponges, who has generously agreed to be our adviser on this ongoing project.

Heidi Fourie

Bruce Rubidge and I are busy preparing a paper on the postcranial morphology of the basal therocephalian *Glanosuchus macrops*. This paper will complete the comparison of morphological and phylogenetic trends amongst the Theriodontia, building on the *Regisaurus* paper. Amidst all of the extra duties due to a lack of staff in the Museum I am also preparing for my yearly fieldtrip to Middelburg, eastern Cape. It will be a welcome break and we hope to add promising localities, meet more farmers and their four legged family, for which we now provide the odd 'beeno', and find well preserved therocephalian postcrania. Indeed it helps to dream. My eager volunteers assisting with the mechanical preparation of the material will join us in the field for a couple of days.

Just a reminder to everyone wanting to study the Karoo Collection at the Transvaal Museum: please follow our procedures. Permission is needed to study, loan, sample, cast, display, or prepare material. This can only be granted by the section curator (Heidi Fourie). It is required of visitors to submit an outline of their project, name their collaborators and submit a time frame. Please make an appointment well in advance and sign the visitors' procedures. Separate permission should be sought to visit other sections, i.e. Archaeozoology (Teresa Kearney/Heidi Fourie) or Palaeontology (Stephany Potze).

Some good news: The Annals of the Transvaal Museum is a 100 years old this year.

UNIVERSITY OF CAPE TOWN Anusuya Chinsamy-Turan

I recently had the opportunity to take 6 months sabbatical in Turkey, where I spent time as a visiting lecturer at three universities (Afyon Kocatepe University, Afyon; Hacettepe University, Ankara; and Ege University, Izmir). I also had time to really get ahead with writing up several projects (see list of articles below) including the work with Laura Codorniu and Luis Chiappe on the rather bizarre pterosaur, *Pterodaustro*. During the sabbatical I also completed a popular level book entitled "Famous Dinosaurs of Africa" which is beautifully illustrated by renowned dinosaur artist, Luis Rey. The book was launched at Scifest Africa in April 2008. In addition to the published articles listed below, I have a few more still in the review process - so all in all this was a highly productive sabbatical!

I am currently involved with Turkish collaborators on the following projects: *Mososaurus hoffmani*; diagnosis of Miocene fossils; and bone growth in modern frogs and turtles. Besides these projects, I am also currently working on some beautifully preserved Mesozoic birds from the Gobi desert, dinosaurs from China, as well as polar dinosaurs from Alaska.

Recent publications

Chinsamy, A. and E. Plaganyi. 2007. Accepting Evolution. *Evolution*, 62-1: 248-254.

Chinsamy, A., Codorniu, L. and L. Chiappe. 2008. Developmental Growth patterns of the filter-feeder pterosaur, *Pterodaustro guinazui*. *Biology Letters*. Doi:10.1098/rsbl.2008.0004

Chinsamy-Turan, A. 2008. Dinosaurs from Inside out: What the bones can tell us. In: *Dinosaurs*. Holtz, T. R., Random House, New York.

Chinsamy-Turan, A. 2008. Famous Dinosaurs of Africa. Struik, SA.

Chinsamy, A. and F. Abdala. In press. The Bone microstructure of South American Traversodontids. *South African Journal of Science*.

Chinsamy, A. and N. Valenzuela. In press. Skeletochronology in the endangered Amazonian turtle, *Podocnemis*. *SA Journal of Science*

Chinsamy, A. In press. Were Dinosaurs Warm. In: *Seventy Greatest Mysteries of the Natural World*. M. Benton, Ed. Thompson, UK.

UNIVERSITY OF LIMPOPO, Medunsa Campus

Johann Welman

It has been a hectic year with classes and co-ordinating the MBChB first years, but I managed to squeeze in a little fieldwork in June at Aliwal North. I am continuing with research on early archosauromorphs and the origin of birds and have a co-authored paper in press with *Acta Zoologica* about the epipterygoid of *Proterosuchus*.

NEWS FROM AROUND THE WORLD

Juan Cisneros

Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil

Sawubona everybody, this is my first Palnews contribution. Since 2007 I have been based at the Federal University in the nice city of Porto Alegre, the capital of the southernmost state of Brazil, and national capital of the steak (sorry Rose). My work here has been possible through postdoctoral funding by Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), which is Brazilians' major source of grants. This is like a return to my origins because it was in Porto Alegre that I obtained my MSc in Geosciences and had my first contact with palaeontology. Last year I focussed on parareptile papers that I had begun while I was based in South Africa. This year I started new projects, and with some colleagues, have been doing fieldwork at the Permian Rio do Rasto Formation, a stratigraphical unit that has not been studied for many years. And we are having good luck, because we found some vertebrates (including nice pareiasaur material) and fossil

wood, among other things. We also have done fieldwork at the Permian/Triassic Pirambóia Formation and found some interesting vertebrate burrows. Apart from the fieldwork I am also studying the tooth histology of a Late Triassic procolophonid reptile from Brazil. This is a completely new area of study for me and I am learning a lot of things. Besides these projects I am supervising an honours student who is crazy about mesosaurs.

I miss biltong and marula cream so I hope to visit South Africa this year!

Recent publications

Cisneros, J.C. Taxonomic status of the reptile genus *Procolophon* from the Gondwanan Triassic. *Palaeontologia africana*, 43: 7-17.

Cisneros, J.C. Phylogenetic relationships of procolophonid parareptiles with remarks on their geological record. *Journal of Systematic Palaeontology*, 22 pp. (First view article).



Come out pareiasaur...

Come out pareiasaur...



Nice trunk hey?



Cattle invade the outcrop.

Arthur Cruickshank Scotland

The proceedings of the North of Scotland symposium on the Elgin fish (Devonian) and tetrapod (Late Permian) faunas, held last September are now published and if anyone wants/needs a copy I can supply addresses.

Both Mark Evans and Richard Forrest continue with their studies of the Sauropterygia, Mark rather more advanced than Richard, but completion 'soon'.

We are bound for a family wedding (younger son) in Bali just as the PSSA Bi-annual meeting starts, so many regrets that we cannot be in two places at once! But the next time...

Best wishes,
And Happy Collecting,
Arthur (& Enid) Cruickshank.

Norton Hiller

Canterbury Museum, Christchurch, New Zealand

Hell's teeth! Where have the last 12 months gone? It seems little time since my last report to PalNews so I must have been busy. I know much of my time has been taken up with Collection Management matters, especially cataloguing a large collection of fossil and Recent brachiopods amassed by the late Professor Robin S. Allan of Canterbury University. I have just reached number 14 500, and that is just the New Zealand material. I still have his foreign collection to sort out.

All this has meant that research has taken a back seat for a while. However, Al Mannering and I finished our paper on Paleocene shark teeth and the newly-retired Dave MacKinnon has joined the museum as a Research Fellow. I have cunningly committed us to submitting a paper to a volume celebrating the contributions of a prominent brachiopod worker. This time, though, the gentleman concerned is still alive! This paper will look at some shell structure details of an Indo-Pacific form, with some of our specimens sourced from South African waters.

Well, it seems that another PSSA conference will come and go without me in attendance. For a change funding was not the issue; it was more of a timing thing. Next time! The last conference I did get to was the SVPCA meeting in Glasgow last September where I was able to spend some time with Arthur Cruickshank. Anyway, I wish everyone well for the Matjiesfontein meeting; I am sure it will be most enjoyable and rewarding.

Publication

MacKinnon, D.I., Hiller, N., Long, S.L., Marshall, B.A. 2008. *Neoemula*, a new genus of platidiid brachiopod, with new observations on species referred to the Recent platidiid brachiopod genus *Amphithyris* Thomson. Fossils and Strata No. 54: 321-331.

Sandra Jasinowski
University of Bristol

Sandra is writing up her PhD thesis "Cranial mechanics of the Dicynodontia" at the University of Bristol. She is looking forward to starting a postdoctoral project with Prof. Anusuya Chinsamy-Turan (Zoology) and Prof. Daya Reddy (CERECAM) at the University of Cape Town in January 2009. She will continue to investigate the cranial histology and biomechanics of *Lystrosaurus* and *Oudenodon*.

Christian Kammerer
University of Chicago, USA

I am still hard at work on the systematics of dinocephalian and therocephalian therapsids, including redescrptions of some long-overlooked (but phylogenetically quite important) taxa. I am also in the process of describing an exciting (to my mind, at least) new taxon of therocephalian from the *Cistecephalus* Assemblage Zone, a preliminary description of which will be given at this year's SVP meeting in Cleveland, Ohio. So, if you didn't already have call to trot across the water for a meeting Stateside, you do now.

Recent travel has taken me through Argentina and Brazil, both rich in cynodont and dicynodont material (and a few tantalizing dinocephalian scraps in the case of the latter), and I just now received funding to travel to India. Examination of the Indian collections in Calcutta will complete my global analysis of "Just About Every Therapsid Ever Known", and I assure you that when that day comes it will be bittersweet.

Tom Lehmann
Germany

I managed to renew my Post doctoral fellowship from the Humboldt Foundation at the Museum für Naturkunde in Berlin...

up to May 2009. The past six months have been busy. I published a paper along with Robert Asher (Asher & Lehmann 2008 BMC Biology) about a possible new synapomorphy of the clade *Afrotheria*. This character, delayed eruption of the teeth, is promising but now needs to be tested against the fossil evidence. Interestingly, we also noted a coincidence between the symptoms of a genetic illness (cleidocranial displasia) and the proposed afrotherian characters.

I also published a review of the *Afrotheria* Clade from a fossil and morphological point of view (Tabuce, Asher & Lehmann 2008 Mammalia). It is an article about the state of the art of the fossil record of the mammals belonging to this clade, which was originally recognised through molecular analyses, and highlights that this clade is still a controversial subject. We showed that this is especially the case regarding when and where the radiation of the last Eutherian Order occurred.

In July 2007, I did some excavation at Rusinga Island (Kenya), a lower Miocene site bearing fossils like *Proconsul* and large dassies (*Afrohyrax*). In collaboration with Kieran McNulty, Holly Dunsworth and Will Harcourt-Smith, I had a pretty good field season and we found some nice new specimens of different taxa, including the rare *Myorycteropus africanus* aardvark.

In this framework, I managed to get a European grant (Synthesis) to study the older collection at the British Museum of Natural History in London during March.

Back in Berlin, I started a μ CT scan project on aardvark fetuses in order to gain insight into the development of their strange dentition. In parallel, teeth are gonna be analysed via different technics to investigate their constitution and micro-structure. This project follows preliminary analyses of aardvark teeth, using CT scans and histological sections performed with Francis Thackeray on material from the Transvaal Museum.

John Long
Museum Victoria, Australia

Our vertebrate palaeontology group here in Museum Victoria has been very busy over the past year. In April 2007 we hosted the Conference on Australian Vertebrate Palaeontology and Evolution (CAVEPS) with 120 delegates attending (including Robert Gess from Grahamstown). We had a great session on lower vertebrates lasting a whole day, as well as a specialist symposium on marine mammals organised by Erich Fitzgerald that attracted some 30 international delegates.

Our research on the Gogo fishes is going swimmingly, with several papers submitted or in press on *Gogonassus* (Tim Holland & J.Long), new Gogo actinopterygians (Brian Choo, J.Long & K. Trinajstić), a new osteolepiform from Victoria (Tim Holland), new basal actinopterygian from NSW (B.Choo), new Gogo holodontids (J.Long), and a new Gogo lungfish (Alice Clement & J.Long). Our highlight this year was the discovery of a 380 million year old Gogo placoderm with a perfectly preserved embryo inside the mother, complete with mineralised umbilical cord preserved (see Long et al, Nature 453: 650-652, May 29th 2008). The new fish, *Materpiscis attenboroughi* honours Sir David Attenborough who first featured the Gogo site in his 1979 series Life on Earth. Since then we have found other Gogo placoderms with embryos, one mother (*Austroptyctodus*) having unborn triplets inside her.

John's book "Swimming in Stone-The Amazing Gogo Fossils of the Kimberley" (Fremantle Press, 2006) gives a complete history of the site and features essays about each of the fish groups.

John's new book, beautifully illustrated with 80 full colour paintings by renowned artist Peter Schouten is called "Feathered Dinosaurs-The Origin of Birds" and it will be available worldwide through Oxford University Press as of August 2008.

John and his students continue work on the Gogo fish fauna and they will all be heading back to the field at Gogo in late July this year.

Sean Modesto
University of Cape Breton, Canada

Greetings from Cape Breton, Nova Scotia. After some delay, the vertebrate palaeontology lab at Cape Breton University is (nearly!) fully operational, and I've been able to take on two students: Mark MacDougall, a second-year undergraduate student, was awarded a summer undergraduate summer research award from the Natural Sciences and Engineering Research Council of Canada, and has been prepping some procolophonid material as an introduction to laboratory techniques. Emily Byington, a first-year student, has been hard at work illustrating the cranial anatomy of an owenettid reptile, towards a systematic revision of 'Owenetta' kitchingorum. Recently I've been engrossed in the description and the phylogenetic analysis of a new parareptile from the Middle Permian Tapinocephalus Assemblage Zone of Northern Cape Province, a collaborative project with Robert Reisz and Diane Scott of University of Toronto in Mississauga. I'm also describing the skull of a new, small reptile from the Lower Triassic Lystrosaurus Assemblage Zone of Eastern Cape Province with Jennifer Botha-Brink (National Museum), Diane Scott, and Robert Reisz.

Recent and forthcoming publications

Modesto, S.P. and J. Botha-Brink. (in press). Evidence of a second, large archosauriform reptile in the Lower Triassic Katberg Formation of South Africa. Journal of Vertebrate Paleontology.

Modesto, S.P. and R.R. Reisz. (in press). New material of *Colobomycter pholeter*, a small parareptile from the Lower Permian of Oklahoma. Journal of Vertebrate Paleontology.

Botha-Brink, J. and S.P. Modesto. 2007. A mixed-age classed 'pelycosaur' aggregation from South Africa: earliest evidence of parental care in amniotes? Proceedings of the Royal Society B 274: 2829-2834.

Reisz, R.R. and S.P. Modesto. 2007. *Heleosaurus scholtzi* from the Permian of South Africa: a varanopid synapsid, not a diapsid reptile. Journal of Vertebrate Paleontology 27: 734-739.

(continued on next page..)

- Modesto, S.P. and R. Damiani. 2007. The procolophonoid reptile *Sauropareion anoplus* from the lowermost Triassic of South Africa. *Journal of Vertebrate Paleontology* 27: 337-349.
- Botha, J., S.P. Modesto and R.M.H. Smith. 2007. Extended procolophonoid reptile survivorship after the end-Permian extinction. *South African Journal of Science* 103: 54-56.
- Modesto, S.P., D.M. Scott, D.S. Berman, J. Müller and R.R. Reisz. 2007. The skull and the palaeoecological significance of *Labidosaurus hamatus*, a captorhinid reptile from the Lower Permian of Texas. *Zoological Journal of the Linnean Society* 149: 237-262.

LINKS

For those of you interested in the transition of tetrapods from an aquatic to terrestrial habit, have a look at this link sent by **John Hancox**, about *Ventastega*, a curious many-toed creature from Latvia: <http://news.bbc.co.uk/go/em/fr/-/2/hi/science/nature/7473470.stm>

The Archaeological Society of southern Africa

<http://www.archaeology.org.za>

Note that you can order some great books in the 'Sales' section of this well-run website. I bet some of the books listed are hard to find elsewhere - ed.

FORTHCOMING CONFERENCES

IOP: International Organisation of Palaeobotany congress
30 August - 5 September, 2008. Held every four years, this is the biggest purely palaeobotanical conference. It's a must, unless you have a small baby and no money...
<http://www.paleontology.uni-bonn.de/congress08/index.htm>

Gondwana 13: Beijing, China

15-18 September, 2008

<http://www.conferencenet.org/conference/gondwana.htm>

GSA: Geological Society of America

5-9 October, GSA Annual Meeting, Houston, Texas USA. Joint meeting of Geological Society of America and the Soil Science Society of America.

<https://www.acsmeetings.org/>

PALASS: The 52nd Annual Meeting of the Palaeontological Association will take place from 18-21 December at the University of Glasgow.

http://www.palass.org/modules.php?name=annual_meeting&page=1

Antarctic Conference for Gondwanan Palaeontology

Antarctic Peninsula March 2009

<http://www.uq.edu.au/dinosaurs/index.html?page=79794>

An International Conference on the Cambrian Explosion

Banff, Alberta 3-7 August 2009

<http://www.geology.utoronto.ca/facultycaron/Walcott2009.htm>

International Symposium on the Cretaceous System

Plymouth, UK 12-19 September 2009

For more information contact Prof Malcolm Hart, School of Earth, Ocean & Environmental Sciences, University of Plymouth, Drake Circus, Plymouth PL4 8AA, e-mail: mhart@plymouth.ac.uk.

SVP 68th Annual Meeting

Oct. 15-18, 2008

Renaissance Cleveland Hotel

Cleveland, OH USA

http://www.vertpaleo.org/meetings/08_First_circ.pdf

SVP 69th Annual Meeting

September 23-26, 2009

University of Bristol, United Kingdom

Première Circulaire – Appel à Participation First Circular - Call for Participation



Premier Congrès International Sur La Paléontologie des Vertébrés du Nord de l'Afrique

First International Congress on North African Vertebrate Palaeontology

(NAVEP1)
25-27 mai 2009 / 25-27 May 2009
Marrakech - MAROC / MOROCCO



Organisé par / Organized by:

- Laboratoire « Biodiversité & Dynamique des Ecosystèmes », Départements de Géologie et Biologie, Faculté des Sciences Semlalia (FSSM), Université Cadi Ayyad, Marrakech (UCAM) - Maroc / Laboratory « Biodiversity & dynamic of Ecosystems », Departments of Geology and Biology, Faculty of Sciences Semlalia, Cadi Ayyad University, Marrakech - Morocco
- Société Marocaine d'Herpétologie - SMH - / Moroccan Society of Herpetology

En collaboration avec/ In collaboration with:
- UMR5143 du CNRS (Paris), Muséum national d'Histoire naturelle, Paris - France

Présentation/Presentation

Depuis les premières descriptions des vertébrés fossiles du Nord de l'Afrique au XIX^{ème} siècle, les découvertes paléontologiques se sont multipliées, notamment au fil des prospections géologiques et minières. Le Nord de l'Afrique est aujourd'hui mondialement renommé pour son riche patrimoine paléontologique. Les fossiles mis au jour permettent d'illustrer les étapes majeures de l'histoire des vertébrés, depuis les Placodermes du Dévonien supérieur (Famennien), aux restes des Hommes modernes fossiles et leurs faunes contemporaines. Néanmoins, et en dépit d'une abondante littérature sur les vertébrés fossiles du Nord de l'Afrique, la paléobiodiversité de la marge nord-africaine du Gondwana reste largement méconnue.

Le premier Congrès sur les vertébrés fossiles du Nord de l'Afrique (NAVEP1) a pour objectif d'offrir une plateforme d'échange, de discussion ou d'information à tous les chercheurs et étudiants intéressés aux aspects de la paléontologie des vertébrés du Nord de l'Afrique et/ou des régions limitrophes et de leurs paléo-environnements. Il sera l'occasion de faire connaître et valoriser les nombreux travaux sur les riches et importants gisements à vertébrés du Nord de l'Afrique et de promouvoir les collaborations scientifiques dans ce domaine. Il offrira aussi l'opportunité de faire un bilan des importants travaux antérieurs, ce qui n'a, à ce jour, pas encore été établi. Ce congrès se déroulera dans le cadre de l'Année Internationale de la planète Terre de l'Organisation des Nations Unies. Il se tiendra à Marrakech où il sera organisé par la Faculté des Sciences de Semlalia de l'Université Cadi Ayyad (Maroc) et la Société Marocaine d'Herpétologie avec la collaboration du Muséum national d'Histoire naturelle (MNHN, Paris) et l'UMR 5143 du CNRS (Paris).

Since the first record of vertebrate fossils from North Africa in the XIXth century, the palaeontological discoveries still grow up in number. North Africa is now renowned for its rich palaeontological heritage illustrated by a great diversity of fossil vertebrates. Most of major steps in the history of vertebrate evolution can be traced throughout North African fossils, from the Late Devonian (Famennian) placoderms fishes to Quaternary fossils of Man and contemporary fauna. Nevertheless, in spite of the abundant literature dealing with vertebrate fossils from North Africa, the North African margin of Gondwana remains poorly understood in comparison with contemporaneous area known elsewhere. The first North African Congress on Vertebrate Palaeontology (NAVEP1) is intended to gather palaeontologists and geologists from all over the world interested by the various aspects of vertebrate fossils from North Africa and/or neighboring regions. It will provide a forum to meet and exchange ideas and information about evolution of vertebrates and their palaeoenvironments. It will also offer the first opportunity to draw the current state of knowledge of previous and current paleontological studies. This international meeting will be organized in the framework of the International Year of Earth Planet as proclaimed by the United Nations Organization. It is organized under the auspices of the Faculty of Sciences Semlalia, Cadi Ayyad University at Marrakech, Morocco with the collaboration of the National Museum of Natural History (MNHN, Paris) and the UMR 5143 of the CNRS (Paris).

Objectifs / Objectives

- Promouvoir les discussions et les échanges entre chercheurs, enseignants-chercheurs et étudiants/*promote discussions and increase interactions among researchers, readers and students;*
- établir un bilan des importants travaux antérieurs sur les vertébrés du Nord de l'Afrique et/ou des régions limitrophes et de leur paléo-environnement/*drawn an up-to-date synthesis on the North African vertebrates fossils and their palaeoenvironments;*
- promouvoir la valorisation, la conservation et la protection des fossiles comme partie intégrante du patrimoine naturel/*promote the conservation and the protection of the fossils as an integral part of the natural heritage.*

Thèmes / Topics

Les thèmes de la rencontre, sans être exclusifs, sont / The Topics of interest include among others :

- 1 / Les vertébrés marins du Dévonien et leurs relations biogéographiques/*Marine Devonian vertebrates and their biogeographic relationships;*
- 2 / Les vertébrés du Paléozoïque et leurs paléoenvironnements associés/ *The Palaeozoic vertebrates and their associated palaeoenvironments;*
- 3 / Le temps des dinosaures et les faunes contemporaines/*The age of dinosaurs and contemporaneous faunae;*
- 4 / Les faunes mésozoïques et la limitée Crétacé-Tertiaire/ *The Mesozoic fauna and the K-T boundary;*
- 5 / Les faunes du Cénozoïque et l'émergence des mammifères africains et de l'Homme/*The Caenozoic faunae and the rise of African mammals and of the Man.*

Tous travaux consacrés aux divers aspects de la paléontologie des vertébrés et à leurs paléo-environnements sont les bienvenus (anatomie, morphologie, ostéologie, systématique, phylogénie, évolution, paléo-ichnologie, taphonomie, biostratigraphie, paléoenvironnements, paléoécologie, paléoclimatologie, paléobiogéographie etc.). / *Every research or study dealing with the various aspects of vertebrate palaeontology are mostly welcomed including: anatomy, morphology, osteology, systematic, phylogeny, evolution, palaeoichnology, taphonomy, biostratigraphy, palaeoenvironments, palaeoecology, palaeoclimatology, palaeobiogeography etc.).*

NEW BOOK

Anusuya Chinsamy's glossy new book on African dinosaurs makes a refreshing change from the Northern Hemisphere-dominated dino-literature. This book is beautifully illustrated and the colourful, clear layout makes it accessible to a broad audience. The book is available at various leading bookstores in South Africa, and can also be purchased through Amazon.com and Amazon.uk.

Description

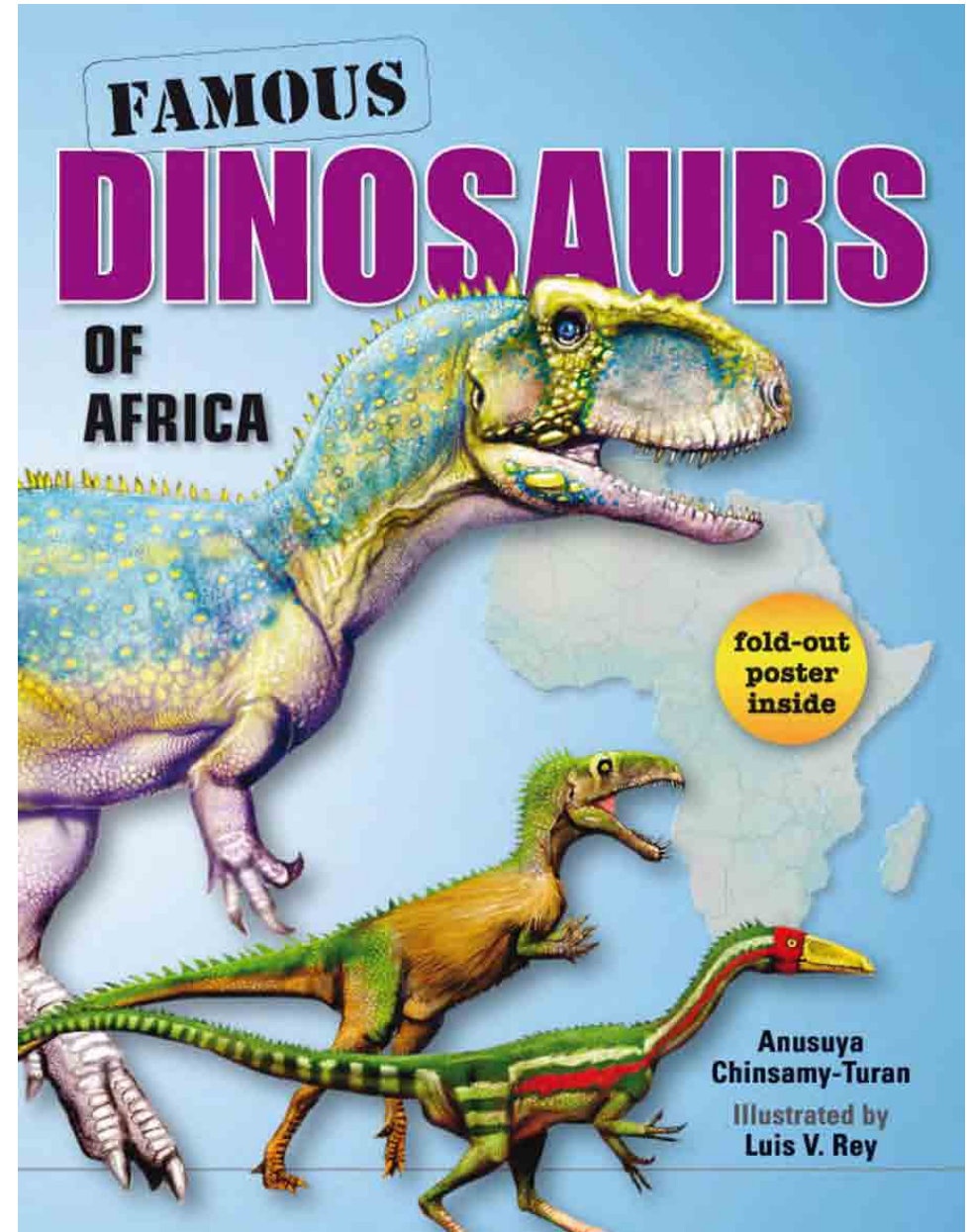
Although African dinosaurs make a significant contribution to palaeontology, they are often omitted from books in favour of better-known species like *T. Rex*. But their fossils have been discovered across the continent -and they are no less magnificent or fascinating than their 'celebrity' cousins.

Famous Dinosaurs of Africa is written for children, but has broad appeal for anyone interested in learning more about dinosaurs. A brief general introduction is followed by short chapters on dinosaur species, among them those that were fish-eating, sociable, predatory, etc, as well as those that were cannibals, and the biggest meat-eating dinosaur of all time – the thread being that they all come from Africa. Details are given about where they were found, the meaning of their scientific names, and their size and diet. Spectacular, colourful illustrations bring the creatures vividly to life; photographs, maps and line drawings further illustrate the subject, while 'Unsolved' and 'Up close' panels add to the intrigue. With a large, pull-out poster, this is a most attractive and inspirational book.

About the Author(s)

Anusuya Chinsamy-Turan, a distinguished scientist and palaeobiologist, is a global expert on the microscopic structure of fossil bones. Among her many achievements, she holds a PhD from the University of the Witwatersrand, is a Fellow of the University of Cape Town, and president of the Association of South African Women in Science and Engineering. In 2005, she won the prestigious "SA Woman of the Year" title, and also received the 'Distinguished Woman in Science' award from the Department of Science and Technology. She is widely published in academic journals and popular media. This is her first children's book.

Luis V. Rey is an illustrator, painter, sculptor and author. A full-time palaeo-artist, his digital paintings of dinosaurs have appeared in many publications and his work has been featured in exhibitions in the USA and UK. Of Spanish-Mexican heritage, he lives and works in London.



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Nestor.Abdala@wits.ac.za
 mattallinson@hotmail.com
 naturaviva@universe.co.za
 e.anderson@ru.ac.za
 Anderson@sanbi.org
 kangelczyk@calacademy.org
 gavery@iziko.org.za
 lucinda.backwell@wits.ac.za
 marion.bamford@wits.ac.za
 bbattail@mnhn.fr
 pkabender@yahoo.com
 lee.berger@wits.ac.za
 blackbeard.m@gmail.com
 e.bordy@ru.ac.za
 jbotha@nasmus.co.za
 bpipal@geosciences.wits.ac.za
 braga@cict.fr
 brainnew@iafrica.com
 jbrink@nasmus.co.za
 elizeb@nasmus.co.za
 achinsam@botzoo.uct.ac.za
 cisneros.jc@gmail.com
 mcoates@uchicago.edu
 Codron@ukzn.ac.za
 ronc@minevol.co.za
 plesiocruick@yahoo.co.uk
 rossano1973@googlemail.com
 B.deKlerk@ru.ac.za
 bonita.deklerk@students.wits.ac.za
 doehne@global.co.za
 catherine.druce@wits.ac.za
 fd@rau.ac.za
 hfourie@nfi.museum
 tfranzod@dal.ca
 robg@imaginet.co.za
 gommery@ivry.cnrs.fr
 romala@discoverymail.co.za
 fgrine@notes.cc.sunysb.edu
 gideon@bhm.dorea.co.za
 pippah@iafrica.com

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 Harley, Eric
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 Ovechkina, Maria
 Pereira, Lucille
 Pickering, Robyn
 Pickford, Martin c/o
 Potze, Stephany
 Prat, S.
 Prevec, Rose

jhancox@cciconline.com
 harley@chempath.uct.ac.za
 nhiller@cantmus.govt.nz
 jhopson@midway.uchicago.edu
 hkholmes@bigpond.net.au
 huttenla@csusb.edu
 S.Jasinowski@bristol.ac.uk
 jinnahz@science.pg.wits.ac.za
 jonkeria@gmail.com
 tom.kemp@oum.ox.ac.uk
 gmk20@admin.cam.ac.uk
 hklinger@iziko.org.za
 past@fusionreactor.za.net
 thomas.lehmann@MUSEUM.HU-Berlin.de
 mleslie@sahra.org.za
 seanlinkermann@hotmail.com
 jlong@museum.vic.gov.au
 mloots@medic.up.ac.za
 questar@icon.co.za
 trm@star.arm.ac.uk
 tmatthews@iziko.org.za
 rudget@mweb.co.za
 ian.mckay@wits.ac.za
 mckee.95@osu.edu
 mclachlai@petroleumagency.com
 Fourie.h@nfi.co.za
 helke.mock@gmail.com
 Sean_Modesto@uccb.ca
 mmostovski@nmsa.org.za
 tebogomothupi@yahoo.co.uk
 jneveling@geoscience.org.za
 NicolasM@science.pg.wits.ac.za
 boelofsen@mweb.com.na
 movechkina@mail.ru
 lucille.pereira@students.wits.ac.za
 robyn.pickering@geo.unibe.ch
 bsenut@cimrs1.mnhn.fr
 potze@nfi.museum
 sandrineprat@hotmail.com
 Rose.Adendorff@ru.ac.za

Raath, Mike
 Renaut, Ray
 Roberts, Eric
 Rossouw, Gideon
 Rossouw, Lloyd
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 Yates, Adam
 Zipfel, Bernard

mickraath@gmail.com
 sunflowers@ananzi.co.za
 robertse@geosciences.wits.ac.za
 gideon.rossouw@nmmu.ac.za
 lloyd@nasmus.co.za
 bruce.rubidge@wits.ac.za
 icrust@iafrica.com
 elizabeth@vodamail.co.za
 scottl.sci@ufs.ac.za
 frank.senegas@ivry.cnrs.fr
 bsenut@cimrs1.mnhn.fr
 russell.shone@nmmu.ac.za
 casidor@u.washington.edu
 rsmith@iziko.org.za
 info.humanorigins@gmail.com
 gail@thestrongs.co.za
 dstynder@iziko.org.za
 tawanem@yahoo.com
 thack@nfi.museum
 javdh@maties.sun.ac.za
 eddie@vandijks.com
 phoenixstarscry@yahoo.co.uk
 m.vermaak@ru.ac.za
 nhleiks2002@yahoo.com
 a.warren@latrobe.edu.au
 jwelman@medunsa.ac.za
 yatesam@gmail.com
 Bernard.Zipfel@wits.ac.za

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