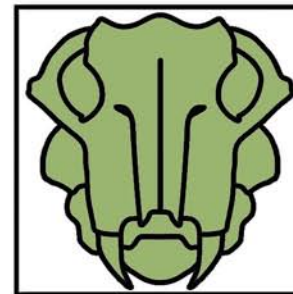


PALNEWS

BIANNUAL NEWSLETTER OF THE PALAEOONTOLOGICAL SOCIETY OF SOUTHERN AFRICA

(HALFJAARLIKSE NUUSBRIEF VAN DIE PALEONTOLOGIESE VERENIGING VAN SUIDER AFRIKA)

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Acting Editor: Billy de Klerk (b.deklerk@ru.ac.za) (Tel: 046 6222312 / Fax: 046 622 2398)

Editor: Rose Prevec (rose.adendorff@ru.ac.za) (Tel: 046 6038310 / Fax: 046 6229715)

Postal address: Geology Dept., Rhodes University, P.O. Box 94, Grahamstown, 6140

Front cover: Photograph provided by Billy de Klerk.

Mr Dave Green - a tribute

EDITORIAL

Dear Friends and Members of the PSSA,

The old adage that "time speeds up as one gets older" is definitely becoming a reality. Here we are already in February 2008 with good intentions a thing of the past to get this issue of PalNews out by the first couple of weeks in 2008. Sorry about the delay! The good news though is that our Honorary Editor, is on maternity leave..... Yes - Rose and Steve Prevec are proud parents as they produced a new palaeontologist, I mean young son, at the end of October 2007 - Congratulations!! Young Roman (that's his name), is keeping his mum very busy at home for the moment but Rose will be back at work in April. This issue of PalNews is therefore a joint effort with Rose doing her wizardry in layout and graphics from home.

This is a rather thin issue on the news front but

All the best

Billy & Rose



It was with great sadness that the PSSA was informed of the untimely death of Mr Dave Green in December 2007. Dave, a well-loved local farmer in the Estcourt area of KZN had a passionate interest in natural history and was a great champion of South African heritage. Dave's humble and unassuming manner belied a sharp intellect and broad knowledge of the natural world. He wore many hats, including: family man, humanitarian, innovative cattle breeder, keen botanist (Dave discovered several new plant species) and collector of all things archaeological and palaeontological. Dave made some important contributions to South African palaeontology by drawing attention to the wealth of animal and plant fossils in the Estcourt district. The picture of a Karoo rippled madflat, that illustrates the opening of Chapter 8 (p.210) in the book "Earth and Life" by McCarthy & Rubidge is a feature on Dave's farm.

Members of the PSSA wish to extend their deepest sympathies to the Green family - Mrs Dorothy Green and sons David, Michael and Arthur and their families, including daughter-in-law Dawn, also a student of Karoo palaeontology.

TRANSVAAL MUSEUM

Francis Thackeray

An exhibition featuring the original Mrs Ples was opened at the Transvaal Museum on November 8 by Prof. Kgositsile, Poet Laureate of South Africa, representing Minister Pallo Jordan. The exhibition called 'Mother Africa and Mrs Ples' runs until January 31 2008, and is hosted by the Transvaal Museum in co-operation with the French Embassy, in celebration of the diamond anniversary of the discovery of Mrs Ples.



From left to right: Prof. Kgositsile with Prof. Phillip Tobias (centre) and Francis Thackeray.

On 21 September, in celebration of South African heritage, Billy de Klerk delivered the Robert Broom Memorial lecture on the subject of dinosaurs. Billy gave an excellent presentation with reference to Paranthodon and other African dinosaurs. After the lecture, Billy was given a gold medal for his services to palaeontology in South Africa.



From left to right: Francis Thackeray, Billy de Klerk and Wayne Hutchinson (great grandson of Robert Broom).

ALBANY MUSEUM & RHODES UNIVERSITY - Grahamstown January '08

Billy de Klerk

During the latter part of 2007 we hosted a number of visiting palaeontologists from abroad, particularly from the USA. In late July we had Mr. Christian Kammerer, a PhD student from Chicago University arrive to study the Karoo vertebrate fossil collection. He made valuable comments and identification corrections to the taxonomic information of some therapsids specimens. A short fieldtrip was also undertaken with Christian to the Ecca Pass and Pigotts Bridge to show him the geology of the basal part of the Karoo Supergroup and to point out some in situ dinocephalian therapsids fossils in the lower Beaufort beds.

In Early August a short field season was undertaken in the Algoa Basin in both the Uitenhage and Algoa Group rocks. Dr Eric Roberts based at the Geology Dept. at Wits and Dr Dave Goodwin from Denison College, Ohio, US had expressed an interest in spending time in the Eastern Cape with me to identify longer-term research projects in taphonomy, vertebrate palaeontology and invertebrate palaeontology. Over a 10-day period we visited a number of previously known and very productive fossils sites in the Kirkwood, Uitenhage and Port Elizabeth areas. As a number of years had elapsed since last visiting some of the sites, a considerable amount of time was spent exploring for newly exposed fossils.

Sites that were visited and reinvestigated included the discovery site of Paranthodon at Bushmans River; a productive fossil site at the Shamwari game reserve; several sites along the Sundays River in the Kirkwood area including the Kirkwood Cliffs (Lookout); the Nqwebasaurus (Kirky) dinosaur site. In addition, Sundays River Formation sites were investigated for the first time near Addo Bridge, where a number of crustacean

fossils were found. Of particular significance was the identification of new trace fossils in the Alexandria Formation at the Coega brick quarry site and in the Salnova Formation near the mouth of the Swartkops River. These new trace fossils occurrences are currently being evaluated and researched.

Also of great significance, was the discovery of new sauropod dinosaur fossils which were collected in the general vicinity of the original discovery site for Nqwebasaurus (Kirky). At this stage a single very large cervical vertebra is being prepared, which represents a significant new form of titanosaurid for the lower Cretaceous.

In early November we had a visit from Dr Peter Makovicky of the Field Museum in Chicago, US. Peter is a well-known dinosaur palaeontologist specializing in small theropod forms. He was keen to take a closer look at the type specimen of Nqwebasaurus (Kirky). Lastly in late November Prof. Paul Sereno and his wife Gabrielle Lyon, from the University of Chicago, visited the Museum with the express intention of studying Nqwebasaurus. We had a good two-day session with Kirky, and in discussion it emerged that he is of the strong opinion that Nqwebasaurus is a basal ornithomimid dinosaur. In our discussions we thought it prudent to draft a more detailed account of the specimen in collaboration with Prof. Cathy Forster of George Washington University. The provisional plan is to submit a paper to the Journal of Vertebrate Paleontology.

While in Grahamstown, Paul also took the opportunity to study all our Cretaceous vertebrate fossil material from the Kirkwood formation. It was also very useful to exchange education ideas

with Gabrielle Lyon who heads up "Project Exploration" - a Chicago based company that promotes dinosaur research and education in the US.

The visit by Prof. Sereno and his wife was a very productive one and it is hoped that this collaboration will continue for some time into the future.



BERNARD PRICE INSTITUTE FOR PALAEOONTOLOGY WITS UNIVERSITY, JOHANNESBURG

The BPI has had a productive 2007. We have a large group of MSc and PhD students, and all our 5 honours students passed with Natasha Barbolini and Shazaadee Karodia achieving firsts. Juan Cisneros, Merill Nicolas, and Andrea Sanderson all successfully completed their PhD degrees, while Richard Mason and Bonita deKerk were awarded MSc degrees, with Bonita achieving a distinction.

The new University of the Witwatersrand Curator of Collections is **Bernhard Zipfel** who took up the position that the legendary **Mike Raath** previously held. Bernhard is a palaeoanthropologist with a special interest in the evolution of the human foot, the origins of hominin bipedalism and palaeopathology. He became the Curator of Collections at the University of the Witwatersrand in 2007 and was formerly the Head of podiatry at the University of Johannesburg. In addition to the fossil collections at the Bernard Price Institute for Palaeontological Research, he also manages the fossil primate collections at the School of Anatomical Sciences and rock collections at the School of Geosciences.

Ian McKay's outreach programme has been more productive than ever before and has involved several different projects:

Museum Tours

As an experiment we combined the palaeontology outreach programme with the outreach programme of the South African Rock Art Museum. The result was more than 4000 visitors at the Kitching Fossil Gallery and the total would have even been higher if it were not for the education strike early in the year. Hopefully we will be able to repeat the same success in 2008.

African Origins Month

Another experiment which we attempted in 2007 was to provide a two day field palaeontology course, funded by SAASTA (The South African Agency for Technology and Science Advancement) for Geology students at Fort Hare University. The students were first taken to the Albany Museum where they received an overview of Karoo Palaeontology from Billy De Klerk using the museum exhibit as a prop. Next they visited the Ganora farm and the Kitching Fossil Exploration Centre at Nieu Bethesda. Here they were given the opportunity to see more exhibits on Karoo Palaeontology and also examine fossils still imbedded in the rock (under the guidance of Bruce Rubidge). Finally, the students visited the Permo-Triassic extinction boundary near the Lootsberg Pass. By all account the students enjoyed the course very much and thought that it would be worth repeating.

Evolution in the School Curriculum

An exciting development in South African schools will be the first-time inclusion of evolution and the fossil record in the Life-Sciences matric syllabus in 2008. Most Life-Sciences teachers know very little about evolution and the fossil record with the result that the Education Department has instigated a training programme to assist teachers with these controversial topics. In 2007 BPI Palaeontology and Wits Life Sciences presented courses on Evolution and the Fossil record to approximately 90 Department of Education Life Science Subject Advisors from all the provinces except the Western Cape. The course presented was unique because it combined hands-on theory work together with examination of museum exhibits and actual fossils at BPI Palaeontology and the Cradle of Humankind. Now it will be the task of the subject advisors to go forth and train the teachers in their particular districts.

Human Evolution Teaching Kit

During the Evolution Course many of the subject advisors asked if they could get casts of skulls to help them teach human evolution. In response we have put together a collection of five casts of skulls (modern human, chimpanzee, Mrs Ples, Paranthropus robustus, and the Taung Child) in a Perspex case which will be available to teachers to help them teach about human evolution. The current price for the set is about R6000 (this is the cost price) but we are trying to bring the price down. If you are interested in ordering a set please contact Ian McKay (ian.mckay@wits.ac.za).



Fig 1. Sceptical Life-Science Subject advisors in the BPI Prep Lab



Fig 2. Is that fossil real? Life Science subject advisors in the Kitching Gallery.

On the research front **Marion Bamford** has been her usual productive self and has participated in several field excursions in East Africa. She spent the first half of September in Melbourne at the Royal Botanic Gardens working with Prof David Cantrill on their Mesozoic Biodiversity project funded by the NRF and SIDA. She also gave a talk there on the fossil woods from East Africa. The rest of September and October were spent teaching undergrad and Honours topics. Prof Charles Peters (University of Georgia, Athens, USA) visited again in November and he and Marion continued their work on the modern wetland at Seekoeivlei and the Olduvai fossil plants. **Lucy Pereira** handed in her MSc dissertation in December and she and Marion were recently in Spain working at the University of Barcelona with Prof Rosa Maria Albert on phytoliths. Rosa and Marion have been working together at Olduvai Gorge,

Tanzania, for several years. Now Lucy is working on phytoliths from Koobi Fora, Kenya, for her PhD and is learning the extraction and analysis methods in Rosa's modern laboratory. Marion was made a Fellow of the Royal Society of South Africa, so in August she went down to Cape Town for the inauguration dinner. At the Geosciences Christmas dinner she was awarded the Geosciences Annual Service award for 2007. In November the Wits University Press published a book edited by Phil Bonner, Amanda Esterhuysen and Trefor Jenkins entitled "A Search for Origins: Science, History and South Africa's 'Cradle of Humankind'" for which Marion contributed a chapter on the flora.

Fernando Abdala has been busy with projects on therocephalians and cynodonts. In the first group a manuscript describing the earliest therocephalians from the *Eodicynodon* Assemblage Zone of South Africa (coauthored with Bruce Rubidge and Juri van den Heever) is in press. Also in press is the description of a second cynodont discovered in the Tropidostoma AZ of the Karoo and thus one of the oldest in the world (coauthored with Jennifer Botha-Brink). A first contribution of an unusual therapsid with *Allotherium*-like crowns from the base of the *Cynognathus* AZ (coauthored with Helke Mocke and John Hancox) was published last year. The work in this project continues with a manuscript in preparation providing more detail of the findings. A manuscript about the palaeobiology of South American cynodonts using information of limb bone histology (coauthored Anusuya Chinsamy-Turan) was recently submitted. Finally, he very recently submitted a manuscript describing cynodonts from the Omingonde Formation, Namibia that provide additional links between Anisian east and southern faunas from Africa, South America and Antarctica (coauthored with Roger Smith of the South African Museum).

During October **Adam Yates** attended the SVP congress in Austin, Texas where he presented the results of the Heelbo project to an international audience for the first time. The announcement paper describing a new fauna of dinosaurs from South Africa is just weeks away from submission. Adam also took the opportunity to spend a week in the dinosaur collections of the Natural History Museum in London. Here he compared ornithischian fossils from Fouriesburg (collected in March 2007) to the types of *Lesothosaurus* and *Stormbergia*. He, together with Paul Barrett and Richard Butler, determined that the specimens represent a new, larger, species of *Lesothosaurus*. A paper describing this new species and revising the taxonomy of South African 'fabrosaurs' is now in preparation. No sooner had Adam touched ground than he was off to Australia, this time to complete some research on the Cainozoic molluscan faunas of the Murray Basin in South Australia (a big change of pace). Several new species were discovered, including Australia's oldest cowries. Hopefully future research will clarify the relationship between the Australian endemic cowry radiation and its sister clade which is endemic to South Africa.

Bruce Rubidge took a 3 month sabbatical to write up several papers which needed to be finalized. These included a description of the basal biarmosuchian *Hipposaurus* in collaboration with Chris Sidor, description of the lithology, stratigraphy and biostratigraphy of the Beaufort-Ecca contact in the south-eastern part of the Karoo basin (with Richard Mason and John Hancox), dating ashes from the lower Beaufort (with Sam Bowring, Doug Erwin and Billy de Klerk). In addition he has recently (with Zubai Jinnah) published a paper on a double tusked specimen of *Eodicynodon*, and has a paper in press describing a new specimen (collected north of Grahamstown, and is only the second specimen known) of the milleretiid *Broomia* which is known from the

Tapinocephalus Assemblage Zone. Toward the end of August Bruce (together with Maarten de Wit, John Rogers, Roger Smith, John Anderson and Doug Cole) attended a unique and remarkable workshop in Gramado entitled "Problems in Western Gondwana geology: South America-Africa correlations: du Toit revisited". The purpose of this meeting was to discuss Gondwanan correlations with colleagues from Argentina and Brazil and was an amazing experience. We spent three wonderful days poring over large scale preprinted Gondwana maps and stratigraphic wall charts discussing these, and refining correlations to improve understanding of the tectonic, stratigraphic and palaeogeographic fit of the two continents. To round off the year, just before Christmas, Bruce accompanied a DST delegation to Beijing to finalise a bilateral research agreement in palaeosciences between South Africa and China. Hopefully this will soon release funding for palaeontologists and archaeologists wishing to do research in China.

In the past six months **Lucinda Backwell** and colleagues have published a book chapter on the identification and use of early hominid bone tools (d'Errico & Backwell 2007), and a journal article on bone tools from the Howiesons Poort (HP) layers at Sibudu Cave, dated ~61k (Backwell, d'Errico & Wadley 2008). In the latter they tentatively propose a shift from the use of hand-delivered bone spear heads in the Still Bay to bow and bone arrow technology in the HP. If this is confirmed by future discoveries, the bone point from the HP layers at Sibudu Cave would push back the origin of bow and bone arrow technology by at least 20 000 years, substantiating arguments in favour of the hypothesis that crucial innovations took place during the Middle Stone Age (MSA) in Africa. In December Backwell & d'Errico drafted a manuscript entitled 'Early hominid bone tools from Drimolen, South Africa', which is to be submitted for publication shortly.



Figure 3. Bonita de Klerk (PhD. Palaeoanthropology candidate) stands on a gritty gravel horizon rich in Middle Stone Age lithics (30-200k) in an excavation pit located on the dry margin of the Wonderkrater peat mound, Limpopo Province, South Africa.



Figure 4. Exploratory excavations in the water table in the centre of the Wonderkrater peat mound have revealed faunal remains, including rodent and rhino, and a thick sand layer rich in well-preserved Middle Stone Age lithics.

In the third field season at the Wonderkrater peat mound site, the team discovered rhino, antelope and rodent remains, and additional Middle Stone Age tools in a gritty gravel horizon, in an excavation trench near the margin of the mound (Figure 3). Eighty MSA flakes and 25 cores were retrieved from a thick sand layer from a small exploratory pit in the wet centre of the mound (Figure 4). This Middle Stone Age marker horizon likely represents an arid phase in South African history when the mound was deflated, suggesting that the site represented a place of refuge for Middle Stone Age people. Analysis, dating and calibration of stratified deposits from excavation pits and previously drilled cores is ongoing.



Figure 5. National Museum-Wits University excavation team at Heelbo, a Holocene large mammal mass death site in the eastern Free State, South Africa. From left: Abel Dichakane, Isaac Thapo (headless), Adam Thibeletsa (seated), Piet Mdala standing, Koos Mzondi (seated on bucket) and Lazarus Chauke (Transvaal Museum). Lucy Pereira (PhD. Palaeobotany candidate) points out a pebble-rich horizon below.



Figure 6. Isaac Thapo (Florisbad Research Station, National Museum, Bloemfontein) excavating a partially articulated wildebeest skeleton at Heelbo.

In the third field season at Heelbo, the site of a large mammal mass death assemblage, excavations conducted by a National Museum-Wits University team exposed the second and third bone horizons (Figure 5), revealing almost completely articulated skeletons in their death positions (Figure 6). Based on a number of taphonomic features - including catastrophic age profile and mixed stages of preservation - together with phytolith data, it is hypothesized that the animals died under drought conditions that lasted a thousand years (4610 - 3610 BP). During the field trip we acquired a fresh springbok carcass to add to our ongoing study of large mammal modification, disarticulation, dispersal and burial in a semi-arid environment.

Lee Berger has spent much of the latter part of 2007 travelling for research and filming of a new television series for National Geographic. The pilot should air in March of this year. Following a discovery in Palau, Micronesia early last year, Lee - along with BPI students and colleagues from the United States - have conducted several expeditions to the small island on the western Pacific Rim. Watch out in early 2008 for news of their discovery. Lee has also continued his work at sites in the Cradle of Humankind. At Coopers, he continues his research with **Christine Steininger** and lots of new fossils have been recovered. Gladysvale continues to produce remarkable fossils and some important new discoveries should be published in 2008. With co-author Brett Hilton-Barber, Lee has published a new book on the Kruger National Park. Lee has also been involved in a new open-access internet drive known as Citizendium founded by the co-founder of Wikipedia - Larry Sanger - and Lee now serves on the Executive Committee of this new online encyclopaedia.

Bonita de Klerk is busy with a PhD project under the supervision of Lee Berger on size variation and body proportions in an isolated holocene-aged population of hominids from Palau, Micronesia and its impact on our understanding of variation in extinct hominids. This project is a result of excavations and data collection that took place in Palau during the middle part of 2006 and beginning of 2007.

Ucheliungs and Omedokel Cave, in Palau are the sites of a new hominid discovery. Preliminary excavation and surface sampling of two burial caves produced a large number of recent *Homo sapiens* skeletal remains representing a small-bodied island population.

The specimens show a population of small-bodied hominids which range from the largest specimens within range of small living humans and the smallest individual approximating the body size reported for *Homo floresiensis*. This pygmization may be due to island dwarfing. The sample also shows traits such as weakly developed to absent chins, large dental dimensions, and proportional facial size reduction. The sites are likely to give an accurate indication of body size variation in this population as it contains individuals of all ages. This population promises to give us unique insights into the potential variation in human body size, island populations and human evolution in an island habitat and how size variation is effected by island conditions, as well as species concepts in the Homininae. In 2007, Bonita completed most of her data collection. The first phase of data collection took place in Palau, in February 2007. Measurements were taken on all measurable skeletal elements collected from the two caves. Phase 2 of her data collection involved compiling a comparative data set, using the Dart Collection at Wits as well as in various collections in the USA and UK. This data set focuses on small-bodied individuals and will be used as a comparison to the Palauan specimens discovered.

Ceri McCrae, who is busy writing up her MSc on a comparative study of Late Holocene and Plio-Pleistocene microfaunal owl accumulations, travelled up to the Lunho District, east of Lake Niassa in Northern Mozambique with the French team, Hom-Fam, to which she is affiliated. The area is still very undeveloped and the journey entailed regular stops for tyre changes, fights with air filters and negotiations for fuel en-route. The trip was extremely successful with the team returning with a far better understanding of the area's geology and champing at the bit to return to excavate.

Natasha Barbolini completed her Honours degree at the BPI last year, and for her project, reconstructed the feeding envelope of *Massospondylus carinatus*, a prosauropod dinosaur of southern Africa. Its range of neck movement was established through manipulation of plasticine models of the cervical vertebrae. This was incorporated with data about body posture, diet and habitat. No previous work had been done on the neck posture of prosauropods while conversely, this has been a highly controversial topic in their sauropod relatives in recent years. Various lines of evidence reveal that the neck posture of most sauropods was actually closer to the horizontal, rather than being giraffe-like as previously assumed. While most sauropods possessed a good range of lateral and ventral movement, their dorsiflexion was limited. This project revealed the same to be true for the prosauropod *Massospondylus*. More research will be done in this area during 2008, with CT scans of the vertebrae being used to create a digital 3-D model of the neck.

Luke Norton has been busy with the description of a tapinocephalid dinocephalian from the Koonap Formation (*Tapinocephalus* Assemblage Zone) in the Grahamstown District. This skull is of particular interest for several reasons. It is one of very few tapinocephalid dinocephalian specimens found with the teeth still in situ. AM 6556 also has some features of the skull that are not typically thought to be tapinocephalid features. These include a narrow postorbital bar, large temporal fenestra and when compared with the skull of the more well known tapinocephalids (e.g. *Moschops*, *Struthiocephalus*, *Tapinocephalus*, etc.), the skull does not show the same degree of thickening of the bones (pachyostosis). A phylogenetic analysis, as well as visual comparisons indicate that the specimen differs from other known tapinocephalids and will be described by Luke in collaboration with Bruce Rubidge and Billy de Klerk.

IZIKO SA MUSEUM

Herbie Klinger

In September I spent one week in the field in KwaZulu with Wolfgang Grulke, a friend from Johannesburg. Unfortunately I could only spend a week in the field, but what I found was most satisfying. It is a pity though, that I spent more time writing proposals and applications for permits from numerous authorities than I actually spent in the field. My main objective was to examine critical sections in the Upper Cretaceous around False Bay and St Lucia and adjacent areas. Unfortunately (for me that is) the lake levels had returned to their normal levels, in contrast to the previous year when I had to face dust storms in areas which has previously only been accessible by boat.



Fortunately the staff of False Bay Park transported us to various localities by boat. At Hells Gates I found new exposures with the rare Campanian ammonite *Hoplitoplacenticerias howarthi* including one with preserved lappets and rostrum on the aperture - the first unmistakable sign of dimorphism in the group.

On the southern part of False Bay I examined the Santonian/Campanian boundary, and found the same faunal succession as at Mzamba in the Eastern Cape Province, but the relative proportions of the faunas differ. *Pseudoschloenbachia* and *Hauericeras* are rare, compared to common at Mzamba, whereas *Reginaites* is common in False Bay.

I also managed to find a limb bone of what seems to be a marine reptile, probably *Tylosaurus capensis*.



We paid a quick visit to Phinda Estate, where I gave a powerpoint presentation to trainee game rangers on my Cretaceous Research over the past 35 years.

At Richards Bay we paid a short visit to the excavated material from the Harbour development. Here I found three shark vertebrae, which our star preparatory, Annelise Crean prepared for me.

All in all, a very successful field trip, but, sad to say, most probably my last before retiring to the beach at Melkbosch with my surfboard.

Back in my office another round of writing reports to all the relevant authorities. Then back to the business of trying to get volume 3 of African Natural History to the press. By the way, we are looking for contributions to this journal which is in part, a replacement for the old Annals of the South African Museum.

NEWS FROM AROUND THE WORLD

Arthur Cruickshank

Not much to report. Enid and I are now well settled into our old brewery in Hawick, in the South of Scotland! We had a very good meeting in Elgin, (Scotland) at the end of September, reviewing the Elgin vertebrate faunas - Devonian and Permo-Triassic - in the form of a day school on the Saturday, then a field trip on the Sunday. Well attended and with decent weather! Subsequently I have been involved in putting finishing touches to a MS on the Ichthyosauria on behalf of Bob Appleby's widow, with Jeff Liston of the Hunterian Museum of Glasgow University and Darren Naish of Portsmouth University. A bit of getting to know just a little of another group! Both Mark Evans and Richard Forrest make steady progress with their sauropterygian topics, in spite of many other distractions. Let's hope for a quiet winter and an early spring! It might be possible to add that I will also be writing a paper in collaboration with Lez Noe...guess what on? More plesiosaur taxonomy and function!

WEB NEWS CLIPPING

Fossil of ocean dinosaur found in Arctic

05 Dec 2007

http://www.iol.co.za/index.php?set_id=1&click_id=588&art_id=nw20071204232407591C610937

Oslo - Norwegian researchers have discovered a second rare fossil in the Arctic of a pliosaur, a giant reptile described by experts as the "T-Rex of the oceans", the project leader said on Tuesday.

"We think it is a species unknown until now. Our pliosaur shows significant differences from those discovered in France and Britain," Joern Hurum of Oslo University's paleontology department told reporters.

The fossil, including parts of the skull, was discovered during a dig this past summer in the Svalbard archipelago, about 1 000 km from the North Pole. The bones were found near those of a first pliosaur fossil found a year earlier.

Paleontologists had hoped to find the first animal's entire skeleton - it is believed to have been 10m long and weigh between 10 and 15 tons - but uncovered only large fragments, including its ribcage, a shoulder and leg.

Pliosaurus lived about 150 million years ago, when the Svalbard region was under water, and swam the seas at the same time as dinosaurs dominated the land.

They resembled giant sea lions, with four fins and a snout similar to those of a crocodile, and were the ocean's equivalent of the land-based *Tyrannosaurus Rex*, according to experts.

The massive jaw of the predator could have swallowed a grown man in a single gulp.

"We hope to launch a new campaign this summer to excavate the skeleton of the second pliosaur" that was left on site, Hurum said.

For now, two students are busy gluing together pieces of the first fossil in the basement of Oslo's paleontology museum, a puzzle that counts thousands of pieces and which could be completed early next year.

TEACHING OF EVOLUTION AT SCHOOLS IN SA

As many of you may know by now, the teaching of evolution in SA schools to grade 12 learners is planned to start in 2009. This move by the Education Department has been widely welcomed by the scientific community but has also received a negative response from religious fundamentalist and pressure groups that oppose this development. In the light of the ever increasing number of negative articles and letters in the press the PSSA has prepared the following letter to be distributed to the SA press (both local and national).

SUPPORT THE TEACHING OF EVOLUTION IN SCHOOLS

Recently, there have been several negative reports in the press regarding the theory of evolution. The controversy has been generated by the inclusion of the topic of evolution into the South African school curriculum for the first time. According to the National Department of Education evolution will be taught to Grade 12 Life Science learners towards the end of 2008. The critics of evolution imply that evolutionary theory is some type of religious cult or esoteric philosophy generated by scientific atheists to undermine religious beliefs. This is not correct.

As professional palaeontologists who study fossils on a day-to-day basis we strongly support the inclusion of evolution in the South African school curriculum. We feel that it is a topic that all educated South Africans should know about and understand. After all South Africa contains some of the earliest fossil remains of

human ancestors and is, with other parts of Africa, the Cradle of Humankind. In addition to the fossils of human-ancestors we also have some of the earliest traces of life, an incredible fossil record of mammal ancestors, early plants, and dinosaurs. Evolutionary theory is biology's most important theory as it explains so many patterns observed by life-scientists in nature. Without evolutionary theory biology becomes a mere collection of facts. It is also of day-to-day practical use. For example, it explains why bacteria become resistant to antibiotics, pests become resistant to pesticides and also why it has been so difficult to develop a vaccine against HIV/Aids.

While we acknowledge that conservative religious groups have the right to express their views on evolution we would like to point out that many Palaeontologists are devoutly religious and have no problem whatsoever in reconciling the theory of evolution with their religious beliefs. We also appeal that "evolution dissidents" should be honest and not distort the facts in their argument. As a scientific theory, evolution is supported by observations and experiments from many disciplines. Scientists may disagree on its details but we do agree on its general principles. We believe that every learner should be able to explain the theory of evolution and why South Africa has such a special place in recording the history of life. They should also know that it is possible to reconcile religious beliefs with the theory of evolution. We appeal to every person in South Africa to support the teaching of evolution in our schools.

-----Chairperson Palaeontological Society of South Africa

The following article appeared in the Mail & Guardian in Jan 2008:

Schools' (r)evolution

by Thabo Mohlala (19 Nov 2007)

Published in Jan 2008

A clash between secular and religious conscience could unfold in South Africa's education system -- and different interest groups are set to line up against one another. The teaching of evolution to grade 12 learners from next year might trigger an uproar among South African parents, teachers and religious sectors. Evolution, which will be offered as part of life sciences under the new grade 10 to 12 curriculum by public and private schools, is rated highly by education experts because they believe it teaches learners to think critically and analytically. Its proposed teaching is bound to rattle established norms and beliefs because evolution theory, and its growing body of followers, invariably generates tension between secular, atheist scientists and conservative religions. In the United States a group of Christian parents instituted legal action in 2005 to challenge the implementation of teaching evolution at schools because they felt it undermined their notion of God. Josef de Beer, a lecturer in the faculty of education at the University of Johannesburg (UJ), said teachers of evolution might have religious concerns. "My experience in teaching evolution in a foundation-year programme at the University of Pretoria is that many students find evolution problematic because of their religious beliefs." At a recent conference at UJ, where teachers were trained in evolution, a teacher said: "I am disappointed about the fact that evolution attacks God's creation. It also mixes Genesis with idol worshippers of Babylon, which were never there when God created planet Earth." Another said he thought the topic should be voluntary because he didn't think it suitable for people who believe in God. "I am totally against evolution," another teacher said. Matters came to a head after snippets of a video, *Tiny Humans: Finding Hobbits in Flores*, was shown. The video traces the origin of tiny prehistoric humans somewhere on an Indonesian island. They are depicted as short and dark-skinned people. This offended some black teachers. They said that evolution was a racist theory. It "terribly undermines black people, everything bad gets a black colour. It means blacks were apes," they said. De Beer said there were genuine

concerns about teachers' preparedness. "I do not think that all teachers are ready for the challenge to teach evolution in grade 12 life sciences next year. There is an urgent need to train teachers to deal with this complex issue in the classroom." De Beer and Hugo van Rooyen designed a short course aimed at preparing and empowering teachers on how best to handle evolution in a classroom situation without inflaming religious passions. But Penny Vinjevold, deputy director general for further education and training, said the education department had offered a number of workshops and produced a guide for teachers and parents. The department had been "sensitive to the views of a wide range of persons and attempts at all times to demonstrate this sensitivity" in introducing evolution. Teachers of evolution will need to be well trained. No child would be compelled to "adopt" or "defend the viewpoint or any way subscribe to evolution". So there could be no reason for parents to take legal action, Vinjevold said.

The department took into account the fact that different theories offered a variety of explanations on the origin of human beings. Evolution was one of such explanations and learners were not expected to believe it, but to see it as one school of thought, she said.

The course on evolution focuses on the following key areas:

- * The concept of evolution and natural selection.
- * Methodologies and innovative teaching strategies on how to deal with controversial and ethical issues in a classroom situation.
- * Biological evidence of evolution such as molecular biology, anatomical and fossil evidence.
- * Whether science and religion intersect and are in conflict or can co-exist.
- * How species develop.
- * Macro and micro evolution.
- * Family trees and evolutionary relationships.
- * African perspectives on evolution.
- * The concept of Darwinism.

HERITAGE TRANSFORMATION CHARTER UNDER REVIEW

Compiled by the Government Communication
and Information System

04 Dec 2007

Johannesburg - The Heritage Transformation Charter was provisionally adopted by the practitioners at an Indaba on the matter on Monday, in Midrand.

"There is a dire need to review the legislation in the sector and the department has started a process that will take cognisance of this Charter," said Ntombazana Botha, the Deputy Minister of the Department of Arts and Culture.

All the heritage sub-sectors, including museums, heritage sites, libraries, archives and indigenous knowledge systems are to give comprehensive inputs to the independent team that is drafting the Charter by 14 December 2007.

Professor Muxe Nkondo, the Chairperson of the independent team that is drafting the Charter said: "Agencies that are charged with the implementation of transformation should be given legislative authority to enforce the critical recommendations.

"It is not enough to have the Charter without policy amendments"

The role of the media in promoting heritage that reflects and educate the public about the value of preserving the cultural identity of this country was highlighted as one of the areas that need attention in the Charter.

The use of indigenous languages was also singled out to be emphasised.

The focus areas of implementation were accepted with no objection and include the redress, access, employability and broad based black economic empowerment, repatriation, funding, education and awareness.

"We are not going to have this Charter as just another document but we will make sure that the a five year implementation plan takes place with our energies dedicated to rediscover the heritage of our culturally rich country," said Sonwabile Mancotywa, Chief Executive Officer of the National Heritage Council.

The draft is available on the website of the National Heritage Council: www.nhc.org.za.

- BuaNews

<http://www.buanews.gov.za/view.php?ID=07120409151004&coll=buanew07>



Palaeontological Society of Southern Africa

PSSA'08 - 2nd CIRCULAR

BIENNIAL CONFERENCE INFORMATION

January 2008

Dear Colleague

The 15th Biennial Conference of the PSSA is to be held at the historical **Lord Milner Hotel, Matjiesfontein** in the southwestern Great Karoo. Matjiesfontein is a charming Victorian village situated on Dwyka tillite, tantalizingly close to the boundary between the Cape and Karoo Supergroups. It is easily accessible by road, rail, light aircraft and, of course, on foot or horseback.

The conference will run from the evening of **Thursday 11 September** to the afternoon of **Sunday 14th September 2008**, followed by a palaeontologically challenging two-day field excursion on **Monday 15th and Tuesday 16th September, 2008**.

Call for papers and posters

Please let us know asap if you plan to submit a paper or poster at the conference; 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 as wide a spectrum

as possible 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. Obviously, these extended abstracts will need to be planned, written and submitted well in advance.

Abstracts

Abstracts must be submitted by email or on disc, to arrive no later than **15th July 2008**, to:

John Almond (naturaviva@universe.co.za; 021-462 3622)
and/or **Roger Smith** (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).

Registration

Registration fees will be **PSSA Members R750, Students R300**. The deadline for registration will be **15th July 2008**. Details of registration will be circulated shortly.

Accommodation

Delegates will be accommodated amidst the faded splendour of the **Lord Milner Hotel, Matjiesfontein** (R300 pp sharing, R330 single, bed & breakfast). A **limited** number of places are available **for students only** in 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 Laird's Arms public house (and, of course, the conference venue).

Accommodation arrangements can be made on registration.

Post-conference field excursion

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**. Alert participants will have the opportunity to see a wide range of remarkable rocks and fossils, from the Ediacaran Congo Caves Group through the Ordovician to Early Carboniferous Cape Supergroup, the Permian Karoo Supergroup, the Cretaceous Uitenhage Group, and even fossiliferous late Caenozoic drift. Shared accommodation (1 night) will be at the **Red Stone Hills Guest Farm** near Calitzdorp, nestled among some of the oddest-looking hills in southern Africa. The programme will end on Tuesday afternoon somewhere along the southern margin of the Great Karoo (near Klaarstroom or Prince Albert).

Estimated fees for the excursion are R500-600 pp (own transport).

Provisional conference programme

Thursday	11 Sept	Registration and ice-breaker (from 16h30)
Friday	12 Sept	Registration, opening, scientific sessions. Evening: al fresco dinner in Karoo veld
Saturday	13 Sept	Scientific and poster sessions Evening: PSSA formal dinner
Sunday	14 Sept	Scientific sessions and society BGM
Monday 15 & Tuesday 16 Sept		Post-conference field excursion to the Great and Little Karoo (1 night at Red Stone Hills, 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).

PSSA MEMBERS AND FRIENDS - EMAIL

Abdala, Fernando
 Allinson, Matt
 Almond, John
 Anderson, Eric
 Anderson, John
 Angielczyk, Ken
 Avery, Graham
 Backwell, Lucinda
 Bamford, Marion
 Battail, Bernard
 Bender, Patrick
 Berger, Lee
 Blackbeard, Marc
 Bordy, Emese
 Botha, Jennifer
 BPI secretary
 Braga, Jose
 Brain, Bob
 Brink, James
 Butler, Elize
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 Cisneros, Juan
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 Codron, Daryl
 Cruickshank, Arthur
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 de Klerk; Billy
 de Klerk, Bonita
 Döhne, Ludwig
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 Fourie, Heidi
 Franz-Odendaal, T.
 Gess, Rob
 Gommery, Dominique
 Govender, Romala
 Grine, Fred
 Groenewald, Gideon
 Haarhoff, Pippa
 Hancox, John
 Harley, Eric

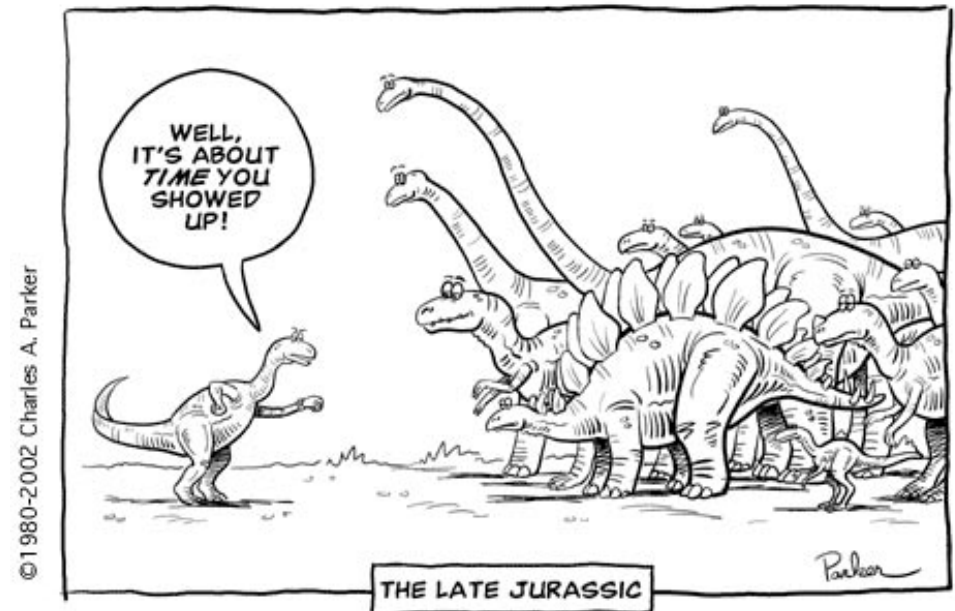
Nestor.Abdala@wits.ac.za
 mattallinson@hotmail.com
 naturaviva@universe.co.za
 e.anderson@ru.ac.za
 Anderson@sanbi.org
 kangelczyk@calacademy.org
 gavery@iziko.org.za
 lucinda.backwell@wits.ac.za
 marion.bamford@wits.ac.za
 bbattail@mnhn.fr
 pkabender@yahoo.com
 lee.berger@wits.ac.za
 blackbeard.m@gmail.com
 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
 plesiocruick@yahoo.co.uk
 rossano1973@googlemail.com
 B.deKlerk@ru.ac.za
 bonita.deklerk@students.wits.ac.za
 doehne@global.co.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
 jhancox@cciconline.com
 harley@chempath.uct.ac.za

Hiller, Norton
 Hopson, Jim
 Holmes, Keith & Heidi
 Huttenlocker, Adam
 Jasinowski, Sandra
 Jinnah, Zubair
 Kemp, Tom
 King, Gillian
 Klinger, Herbert
 Leenen, Andrea
 Lehmann, Thomas
 Leslie, Mary
 Linkermann, Sean
 Long, John
 Loots, Marius
 Maguire, Judy
 Mason, Tom
 Matthews, Thalassa
 McCrae, Ceri
 McKay, Ian
 McKee, Jeff
 McLachlan, Ian
 Meyer, Lynn c/o
 Mocke, Helke
 Modesto, Sean
 Mostovski, Mike
 Mothupi, Tebogo
 Neveling, Johann
 Nicolas, Merrill
 Oelofsen, Burger
 Ovechkina, Maria
 Pereira, Lucille
 Pickering, Robyn
 Pickford, Martin c/o
 Potze, Stephany
 Prat, S.
 Prevec, Rose
 Raath, Mike
 Renaut, Ray
 Roberts, Eric

nhiller@cantmus.govt.nz
 jhopson@midway.uchicago.edu
 hkhomes@bigpond.net.au
 huttenla@csusb.edu
 S.Jasinowski@bristol.ac.uk
 jinnahz@science.pg.wits.ac.za
 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
 RoseAdendorff@ananzi.co.za
 mickraath@gmail.com
 sunflowers@ananzi.co.za
 robertse@geosciences.wits.ac.za

Rossouw, Gideon
 Rossouw, Lloyd
 Rubidge, Bruce
 Rust, Izak
 Schaafsma, Elizabeth
 Scott, Louis
 Senegas, Frank
 Senut, Brigitte
 Shone, Russell
 Sidor, Chris
 Smith, Roger
 Steininger, Christine
 Tawane, Mirriam
 Thackeray, Francis
 van den Heever, Juri
 van Dijk, Eddie
 Vasconcelos, Cecelio
 Vermaak, Marius
 Vilakazi, Nonhlanhla
 Warren, Anne
 Welman, J.
 Yates, Adam
 Zipfel, Bernard

gideon.rossouw@nmmu.ac.za
lloyd@nasmus.co.za
bruce.rubidge@wits.ac.za
icrust@iafrica.com
elizabeth@vodamail.co.za
scottl@sci.uovs.ac.za
senegas@nfi.co.za
bsenut@cimrs1.mnhn.fr
russell.shone@nmmu.ac.za
casidor@u.washington.edu
rsmith@iziko.org.za
info.humanorigins@gmail.com
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



NEXT DEADLINE FOR CONTRIBUTIONS:

FRIDAY 03 July 2008