
◆ Beer 'N' Bones ◆

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Message from the President.

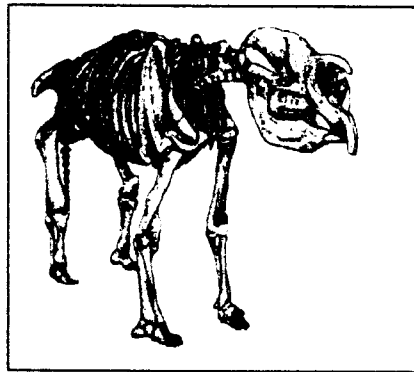
Welcome back for 1997, hope you had a good holiday and all that. From all accounts Naracoorte was much fun again. I'm sorry I missed your birthday this year. Gav, I hear that Pyramo's attempts at economic shopping weren't quite as successful as they could have been. I understand stale cake can be quite tasty when covered with the right sauce e.g. alien.

Planning is underway for the megadig for the megafauna on Kangaroo Island. Costs are being looked at for the trip and all efforts to reduce costs are being made. The trip should be under \$200. If you know anyone in the universe who would like to come even if they are not already members, let us know. The more the merrier (and CHEAPER). Could you please let us know before or at the meeting if you can come to Kangaroo Island.

P.S. If you have any rich relatives looking for a tax dodge they are fully welcome to fund our glorious adventure.

Jo Colmer, *President.*

To all you 1997 Naracoorte people who want to join the Palaeo society, and those who want to go to Kangaroo Island, **NOW'S THE TIME TO DO IT!!!!**



'Stale cake can be quite tasty when covered with the right sauce e.g. alien'

Well, here it is at last. The first newsletter.

The Palaeo Society formed in August late last year after the 1996 Palaeo students decided that they wanted to keep their hands in Palaeo activities. Of course we hope that anyone interested in old bones and beer will join our motley crew, no previous experience necessary, nor do they have to actually intend doing any palaeo subjects.

Our brief existence so far included a curry and beer drinking bout, a field trip to Naracoorte and a successful Fair Day participation. This year's activities will include a major field trip to Kangaroo Island, backstage trip to the palaeo section of Adelaide Museum and lots of socialising involving copious amounts of alcoholic beverages and food. We need lots of new blood with new ideas (even bad ones). If you know of others who are interested in old bones and drinking,

Position Vacant.

drag them along.

The position of Treasurer has become available. Fiona's post grad studies have made it awkward for her to continue in the position. Please register your interest, anyone.

We are again having a display during O-week. Due to the success of the Jack Daniels raffle at the last fair day, we will be repeating this activity and including a second prize of Coopers. There is also a prize for the best display (we will be vying for it, we need all the money we can get!!!!) If you think you can sell a few tickets to your friends and enemies, Jo has tickets available.

Kangaroo Island

The major dig this year, is to KI for about 10 days during April mid-semester break (for details of the what/where, see Gav's report on the next page). It is proposed that we will take a Flinders Uni bus, via Sealink and stay at Adelaide Uni dorm type accommodation. We are able to apply for a couple of grants to help pay for the trip, but we need to know exactly who will be going before we can apply for the grants.

A meeting will be held on 7th March in Biology 029 at 1.00pm.

Please be at the meeting if you're going to KI, or let us know if you wish to but are unable to attend the meeting. The cost will be under \$200, the more that go, the cheaper it will be. (Gav would like about 15) and fundraising will decrease the price even more. It will be practically a virgin dig and **NO ASSIGNMENTS**, so no dire consequences from over socialising.

What's this Rocky River Kangaroo Island Fossil Dig Thing All About?

By Gav

Pleistocene fossils were first reported from the Rocky River area in the 1930s. Periodic discoveries since then have led to the occasional, but unsustained spurts of activity for which palaeontologists are renowned. However, the assortment of groads and the odd nice jaw fragment were never really outstanding enough to fire anyone up to undertake a full-blown excavation - until recently. At the beginning of 1996, Adelaide University student Darren Gröcke dug a grave-sized pit only metres from where a fairly duddish trial dig had been carried out by Geoff and Jeannette Hope in the mid-1970s. This site is located on the edge of a swamp through which Rocky River runs. In an area barely more than a metre square, Darren removed two partial *Zygomaturus* skulls, each consisting of a jaw and partial cranium, and belonging to different species. The first belongs to *Z. trilobus*. Peter Murray (NT Museum) will be describing this new beast in the near future. In the same excavation, Darren also pulled out several roo bones with incision marks on them reminiscent of those made by *Thylacoleo*.

To follow up on the January find and assess the extent of the Rocky River deposit, Rod, Darren, Jeremy Robertson (new eco. lecturer) & family, and yours truly tripped over to KI for a few days last November. We spent the majority of the days putting down augur holes (with a post-hole borer) to assess the extent of the fossil bed, while Darren and I spent the majority of the evenings drinking beer and playing pool in the Ozone Hotel. The auguring enabled us to get a preliminary idea of the stratigraphy and led to the hypothesis that the depositional environment was a billabong. Most holes dug hit bone across an acre or so, so we think the bone bed must be extensive and reasonably consistent, even though I failed to live up to my reputation by not ploughing any

skulls in the process.

The plan for the Palaeo. society RR Offensive in April is to work over a roughly tennis court-sized area, from which the National Park Rangers will clear the top metre or so of overburden, greatly reducing the amount of non-glory-ridden digging. We are hoping that the site will turn out to be rich in megafaunal remains like many swamp sites (unfortunately Australia has few) and that much of the material will be associated.

'I failed to live up to my reputation by not ploughing through any skulls in the process.'

Neal Draper from the FU Archaeology Department recently completed a PhD on the aboriginal history of the area and retrieved many artefacts from nearby lunettes. The potential for finding aboriginal artefacts associated with the megafauna is good. This is particularly exciting as such sites are rare in Australia. Evidence from other continents has shown us that megafaunal species often clung to existence on islands long after they become extinct on the mainland, e.g., 3000 year old mammoths on Wrangel Island, off the coast of Siberia. Kangaroo Island has the potential to prove the equivalent last bastion of megafauna in Australis. Depending on the success of our April mission, we believe that there is scope for one or two Honours projects on the geology or fauna of the site beginning half-way through this year or in 1998.

(Gav is a half-time PhD student half-time associate lecturer in Biology, and hopes to be able to go through life without ever once having had a real job).

Naracoorte: December 1996

Another mob of unsuspecting Vertebrate Palaeo 1 students have been manoeuvred through the Naracoorte experience and are probably at this moment thinking that they should start their essay soon. "Shit, how many days before we go back." (Steve has a report from the students side on the next page)

Here's a couple of "highlights":

☞ Headquarters is now Carter's farmhouse, a little stroll up the road toward Vic. Fossil Cave. This is lecture and assignment territory and sleeping quarters for the highest of the hierarchy. Tent City is still the place to be.

☞ A partial jaw of *Sthenurus pates* was found. This is the largest but most elusive of the sthenurines (A birthday present for Gav, an improvement on the cake).

☞ A couple of interesting social outings transpired (My lips are sealed)

☞ The wonderful world class cricket matches, often resulting with David climbing ropes to retrieve full lobbs into Tomato (Justifiably. It was him who put them there)

☞ Interesting people came and went. Sue Thomas and Sam Mead came down to take more samples (see report on next page). They are researching ancient bacterial colonies. Evidently the colours of many cultures include vivid purples, pastel pinks and BLACK.

Pyramo Marianelli and Linda Ayliffe were over from Canberra to take more samples and do a couple of lectures on dating. Their uranium dating techniques are pushing the age of the caves far older than previously dated. Pyramo's work is, dare I say it, ground breaking. It has been suggested that we should be getting his autograph now.

An entourage of important governmental type people initiated a house-keeping bout of mammoth proportions. Money freed up from the sale of Telstra is flowing the way of environmental

More on Naracoorte

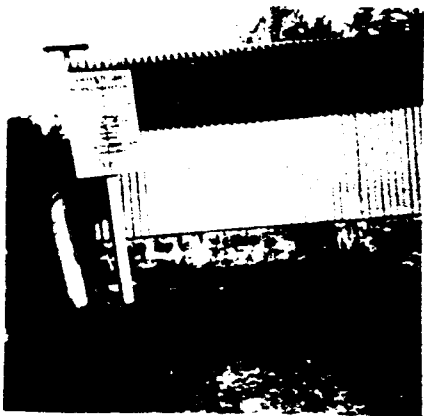
type things, with Naracoorte successfully a beneficiary. The new facilities including an information centre should be completed by Feb 1998.

Liz Reed has just completed her Honours on bone disarticulations in dry and arid conditions, and her observations of bone orientations in the cave were thought provoking. Scott Thompson from Canberra Uni was involved in the course. He is a world expert on turtles and other herpetological type things, and readily imparted his knowledge.

My personal highlight was being able to return to Naracoorte without the stress of assignments, spending every second day digging and generally having a wonderful time!!!!!! And a bizarre experience of finding out that one of the ecotourism students (they were doing a stint at Naracoorte) lives in the very house that I grew up in, in a very insignificant country town.

Lyndlee Turner, Vice-President.

Thanks to Alan Marchioro for this ancient photo of the entrance to the Vic. Cave.



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THE COURSE - PALAEO 1

As a first timer at hands on palaeontology, I didn't expect the trip to Naracoorte to be as exciting, as fun, and as tiring as it was. Late nights followed by early mornings (for some of us) and hard intellectual slog were balanced out beautifully with socialising (ie mainly consuming beverages) and just getting out in the fresh air for two weeks.

I, myself was caught up in the social activities too much and had a lot of work to complete towards the end of the trip (not recommended). At one stage many forgot the work required of us and socialized a little too hard (no names mentioned). The last night was the biggest drinking fest, with a lot of interesting stories arising afterwards. I just wished I could remember some of them. Mainly I found the work interesting (except for the stratigraphy) and kept

"The last night was the biggest drinking fest, with a lot of interesting stories arising afterwards"

me listening, although you couldn't help listening to some people rabble on. More digging would have been appreciated but starting out you've got to start with the basics. Maybe with more dirt, some of us could challenge Gav for his mantle.

Obviously the best way to travel down to Naracoorte is when you're not enrolled in the course, but don't let that put you off, if you're contemplating a first time trip. Student or not, the two weeks at Naracoorte are highly recommended as others would agree and I'll be back there again next time.

Steve Brown is a surviving Palaeo 1 student, who is recovering at a private seaside location, south of Adelaide.

Ancient Bacteria in the Naracoorte Caves

by Sam Mead

The Victoria Fossil Cave at Naracoorte has recently become the sampling site for Microbiologists at Flinders University. It is estimated that scientists are aware of less than 10% of the Earth's bacteria. This is largely due to the fact that many of them are unculturable and/or inhabit niches that are not readily accessed by higher organisms and are therefore often overlooked. The Naracoorte Caves until recently was such a niche.

The Caves provide a unique opportunity to firstly examine the indigenous microflora that inhabit subsurface sediment, a task which to date has not been performed in Australia. Secondly, as tourism at the site increases, the likely impact of anthropogenic change on this unique ecosystem needs to be evaluated. As microorganisms are the predominant life forms of the subsurface any changes to their genetic stability in effect have the potential to destabilise the subsurface ecosystem. Studies at the site have shown that abundant numbers and types of bacteria inhabit the cave system. The initial field trips have given rise to a collection of bacteria from caves that are currently being used in a series of experiments assessing whether previous protocols used in the examination of mutation in clinical strains of bacteria can be applied to environmental isolates. Once this is established we will begin to determine the affect of anthropogenic activity of genome stability in subsurface bacterial populations.

Sam Mead did Honours with Sue Thomas on the Vic. Fossil Cave microbes in 1995-1996 and is currently working as a research assistant with Sue.