NEWSLETTER

Cave Exploration Group

South Australia

C/O SOUTH AUSTRALIAN MUSEUM NORTH TERRACE ADELAIDE

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TOWARDS THE ENTRANCE FROM THE LOOK DOWN,
GREAT HALL, VICTORIA CAVE, NARACOORTE, S.A.

CEGSA NEWSLETTER – VOL. 18 No. 4, FEBRUARY 1974

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EDITORIAL

Every hole is interesting until proved otherwise. If this statement were to be applied to every hole in this State, there would be enough digging to occupy every CEGSA member fulltime for 25½ hours a day, 10 days per week for 400 days a year until Kohoutek next appears. What is wrong with our holes? Should we make them more attractive to diggers out? (and conversely less attractive to fillers in) So all you prospective diggers, get cracking, the rewards are many and varied. For instance, at the Annual Dinner, Leather Medals are generously shovelled out regardless of expense to grateful (?) recipients, the problem of what to do with one's old clothes disappears along with the clothes and the exercise gently spokeshaves one's middle to less rotund proportions. How can you resist such dazzling blandishments? Therefore, arm yourself with a shovel, almost any type will do, except the Dunn Disappearing Mark I Model, and at your convenience, dive down the most interesting looking hole and DIG!

Just seen myself being interviewed on television and a harrowing experience it was too. The film the ABC made of the fossil deposits in the Victoria Cave was shown in their "Weekend Magazine" programme on Sunday 6th January. The film, entitled "Buried Treasure" was made in colour and we hope to obtain a copy from the ABC for the group records. We were underground 8¼ hours and the finished film took about 8 minutes to show, these times are in the usual ratio for such filming activities. The greater part of the time was taken up with moving all the gear between locations, and anyone who has taken cine film and tape recordings in caves will appreciate the difficulties this entails. The film accurately recorded the cave scenes and some of its deposits. The only sour note was right at the end when the commentator stated that the fossils were being stored in a tin shed; a brick built storeroom; yes, but a tin shed? Never!

The report in this issue by David Jacka gives even greater urgency to the requirement for a gate on Wombat Cave. To many scouting, church and local caving people, the location of this once rarely visited cave is now common knowledge. Few of those visiting caves in the area have adequate training and appreciation of where not to put their feet, and gating seems the only way to protect a cave's contents.

E.H. Bailey

"HOW WE CLEANED OUT THE TOWN CAVE SHAFT" or

"NOW YOU SEE IT, NOW YOU DON'T" or

"DEMOLITION BY APPLIED GIBBEROLOGY"

The entrance to Town Cave, Curramulka, most likely originally existed as a solution tube for nearly all its entire depth of 34m which the early settlers dug out to an average of 3 x 3m to install a bore. The bore was later replaced by a diesel pump and this really begins the story, for they also constructed a series of wooden ladders made of jarrah which connected to several platforms on the way down.

After many years, the water became too brackish, so the cave was abandoned. Shunned by all, it was only visited by that breed of primitive arthropod which (in South Australia) prefers to crawl rather than walk has a single baleful yellow eye set in the middle of its forehead, a chronic aversion to daylight and frightfully elemental eating habits, the TROG.

Entry to the cave for many years required rare gymnastic skill and a substantial decree of fitness because the wooden ladder and its supports began to rot and rust away. First the platforms detached themselves from the walls at strategic points and then sections of ladder fell off, to the stage where climbing down past the old construction with its irregular gaps became very hairy, as it was impossible to avoid bumping the old ladder, thereby shaking huge 9m sections towering above.

Sometime in the past 2 years, Grant Gartrell organised a party to remove the offending ladder after a harrowing experience, where a party came out of the cave proper into theo area beneath the shaft and looked up to see a child 3m done inside the shaft swinging on the top section of ladder (held on by nothing) and with a 30m drop below! Grant's team managed to remove the top 15m of ladder to prevent a recurrence of that, and completed a tidy job by pulling out the rubbish and stacking it in the old tank nearby. However, the bottom 15m remained as a deadly serious hazard to cavers.

Less refined was the method used by the Bomb-dropping Brigade of Max Meth, Graham Pilkington, Jerry DeGraaf and Ian Lewis on their first attempt to remove the bottom section! After Jerry and Ian spent about an hour each hanging on to the wire ladder while trying to cut through the flimsy supports of an estimated 360kg of swaying jarrah and iron, we said "To hell with this! If the ladder won't fall, then we'll PUSH it somehow!" Actually it was Max who came up with a novel solution while we were sitting at the top wondering how the blazes 360kg of unsupported swaying ladder didn't gravitate with alacrity. Max was sitting on this rock ... rock .... ROCK!!!??? ..... !!!???

So after a hastily-convened ballistics conference, and a sophisticated "Lining Up" of the main cross-beam (we tossed handfuls of gravel in), the Town Cave Beambuster Bomb Meth Mark One was posed at the brink and launched ... but the result was rather less than we expected. Pilko was sent down into the gloom to ascertain the extent of the damage and reported that we had only succeeded in breaking the ladder away from the cross-beam so that it now lay all across the shaft in a gigantic zigzag, while the cross-beam itself remained intact.

Glaring sternly down the shaft, we all said "IT'LL HAVE TO GO!!"

As it was getting late in the day, a quick decision was needed. In true caving style, it took us nearly an hour and a half (!) to reach a conclusion — another bomb! THIS time, though, we selected a 50kg block of concrete as the ULTIMATE WEAPON, a far cry from the 14kg Meth Mark One. It took the four of us to move it to the edge of the point of no return for its mission of destruction. The official count-down began "..3..2..1..PUSH!! .. "

At the surface we poked our heads into the hole and listened (like the cat that ate the cheese) with bated breath. For what seamed an impossible length of time, the silence of a funeral hung in the blackness of the shaft. Abruptly a veritable cacophony of wholesale destruction came roaring up at us, an agglomeration of sound that would have done any Goon Show Explosion credit! First there came a splintering crack as the missile sailed straight through the 30cm thick jarrah crossbeam, immediately followed by a shower of sparks as it sheared off half-a-dozen iron rungs in the ladder section directly below. Then for ages we heard rending, smashing and splitting bits of flying ladder, regularly interspersed with the ping-ping-ping of iron rungs and rusty bolts whose elastic limit was being drastically exceeded! Finally an all-pervading BOOOM echoing up the shaft told us that the bottom had been reached.

It took half-an-hour for the dust to settle. Even then, we could not light up the shaft adequately enough to discern the result, so we floated down a blazing sheet of newspaper which showed a miniscule heap of distorted timber 30m down.

The bomb (christened "Hundredweight Henry") had done its work.

Ian Lewis

HAPPY EVENT DEPARTMENT

Congratulations to the following :-

Grant and Leslye Gartrell on the birth of their son
Neil, on 24th November, 1973.

Neil and Linda Oxley on the birth of their daughter
Naomi, on 28th December, 1973.

Jim and Lyn Evans (nee Fieldhouse) on the birth of their daughter
AnnMarie on 30th December, 1973.

Easter Trip to Kangaroo Island

Those people intending to participate in the Kangaroo Island trip over Easter 1974 should contact me as soon as possible to enable transport booking arrangements to be made. Easter is a popular period and those who do not book early are likely to miss out.

It is planned that the trip should extend beyond Easter, and for most people this would mean taking an extra 3 days leave.

Tentative bookings have been made for 5 cars and 20 people on the Troubridge departing 1.45 p.m. Tuesday 9th, April and returning Easter Monday night 15th April at 11 p.m. (arrive Port Adelaide 6 a.m. Tuesday). Total transport cost of trip should be approximately $25 per head. Those with more time available may care to stay on until the night of Wednesday 17th, and those with less time might be able to arrange to fly over and/or back rather than go by ship. It is almost certain that more than 20 will want to go, since this number have already indicated interest.

There is enough work, including new exploratory work, both surface and underground, to keep us going for years, and you can be assured of an interesting trip.

Please confirm arrangements with me as soon as possible. All applications to attend should be in writing and accompanied by a deposit of $10 per head. Bookings not made before the end of February will take pot luck.

G. Gartrell - Trip Leader

YET ANOTHER DIPROTODON, a new species? the Diprotodon Poulter.

N. Poulter (Speleological Research Group Western Australia).

In an effort to pursue their hobby to the full, speleo-photographers arm themselves with an ever increasing array of 'apparatus' collectively known as "necessary photographic equipment". The most bizarre piece - the Diprotodon - falls into the realm of large scale speleophotography.

Large scale speleophotography is difficult to set up, control and illuminate. Difficult to set up due to the number of cameras generally involved, variations in lens acceptance angles, different ASA ratings and either too many or not enough personnel and/or equipment.

Difficult to control mainly due to the extreme distances involved between the camera positions and the light source/s coupled with communication problems. Difficult to illuminate the vast chambers in the manner desired and arrive at an accurate exposure factor for the ASA ratings involved. Illumination can be multiple flash or single source used individually or in combination.

This paper deals with the single source, the most popular method being the 'legendary' Diprotodon.

No-doubt the first method of large scale speleophotography illumination was by magnesium ribbon. Magnesium ribbon burns with an uneven flame that makes exposure calculations difficult. This method is sufficient for B&W film which can accept high exposure variations but is inadequate for today's colour film which can only accept a variation of ½ a stop.

The first advance in solving the problem of illumination came in 1935 when H.G. Watson of Ceduna (S.A.) constructed a device around an old fire extinguisher which released pressurised air, blowing magnesium powder from another container across a lighted wick to create a continuous flame. A similar model was constructed in 1955 by Thomson, Hamilton-Smith and Textor, and became known as the Diprotodon Mark 1. The name has since been applied to successive improvements of this device. (Hill 1966)

For the 1956-57 Nullarbor Expedition, Fairlie-Cunninghame created the Mark 2 which eliminated the fire extinguisher by substituting a balloon as the air source. Although weight had been reduced, fuel consumption and flame size were still a problem. The Mark 2 consumed 28g of magnesium a second and burnt with a 1.2m x 1m x 0.3m flame.

The Mark 3 created by Crowle (SUSS) for the 1965-66 Expedition, reduced the size and weight and replaced the igniter wick with a wire element which made the flame self sustaining. The major drawback of the unit was an uneven powder feed and the candle needed to ignite the mixture.

In 1966 the Diprotodon hillii was created (fig. 1). A Diprotodon can only be created, nobody in their right mind would build one. The Hillii was the most successful unit to that date, mainly due to simplified design and the use of high density magnesium. A more detailed description of this model can be found in Mullamullang Cave Expeditions 1966.

Prior to the 1968 ASF Conference, the Diprotodon Crowle came into existence, eliminating the wire element and the need to mount the unit on a tripod, but did not gain general acceptance. Another unit, Macroflash Mark 1, built by E.G. Anderson (UNSWSS) did not gain acceptance either, most likely due to its bulk and high running cost. It used six (PF60 or PF100) flash bulbs fired independently or simultaneously (7th ASF Proceedings). The main advantages of the Macroflash were ease of operation minus the characteristic Diprotodon smoke fallout effect and accurate exposure calculation.

It was during the 1968 ASF Conference that I became interested in the Diprotodon and during 1969 attempted to construct one along the lines of a Hillii but using a 'gas-pak' as a propellant instead of a balloon. It was my belief that having a flammable gas as propellant in contrast to air would be better for the following reasons; the ignited gas would preheat the wire element and pre-ignite the magnesium. Having 'unlimited' propellant, longer burns could be undertaken for the benefit of low ASA films and blockages could be cleared readily by gas pressure alone. Another benefit possible would be less powder being wasted by being able to predict when ignition would take place. Although showing signs of promise, the 1969 version was not a success due to control difficulties with the 'gas-pak'.

During 1972, I again worked on the problem, this time using LPG supplied from a Primus 2000 series gas bottle. Although greatly increasing the weight factor, results overshadowed this disadvantage. The design closely followed the Primus pinpoint flame torch and although early trials in Giants Cave (W.A.) were highly successful, subsequent usage in the Eastern states proved that fuel blockage was a big problem.

Throughout 1973 I tried several designs and finally settled on one that would appear to be a new species - the Diprotodon Poulter? My version would tend to be more expensive to construct due to the use of many Primus components and other items such as a laboratory gas valve and a set of oxy welding goggles. To control the burn it is essential to watch the flame and so the goggles become a necessary item. Unlike the 'Hillii', the headlight reflector has been dropped and the ni-chrome wire element has been replaced by the more readily available stainless steel wire. The design makes use of a Primus control valve, and an 'H' jet, while the nozzle resembles the primus 'H' type full flame burner torch (fig, 2). The use of LPG eliminates the need for wick type igniters and once the gas flow rate has been set, it should need no further attention. If a fuel blockage seems to be occurring, it can be overcome by adjusting the fuel flow rate or momentarily increasing the gas pressure. A length of s/steel wire is used to prevent burnt magnesium building upon the element.

To prevent heat damage to the hands, gloves are another desirable item. Light output is 'E' on the 'Hillii' exposure calculator (Hill).

It could be argued - why bother to encumber yourself with more paraphernalia, just because it seems to be more efficient than other species?

To my way of thinking there are many reasons. The last CEGSA estimate put the High Density Magnesium reserves at about 20kg. Although this sounds a lot - it is not going to last forever, so now is the time to start conserving it. With the Diprotodon Poulter, ignition works on demand with blockages being virtually eliminated, thus saving fuel. The burn is with a steadier flame than other species and appears to give off less smoke. By being able to predict the time of ignition and being more reliable in operation, less time will be spent actually taking the photograph. Weight is not really a problem. I have carried a Primus 2000 series bottle and burner into both Exit (Tas.) and Mullamullang (W.A.) without a great deal of trouble. Because my Diprotodon can be stripped down into small components, weight can be distributed among all participants of a trip.

To my mind this system works efficiently and economically. I feel that anyone who constructs a similar model will come to the same conclusion.

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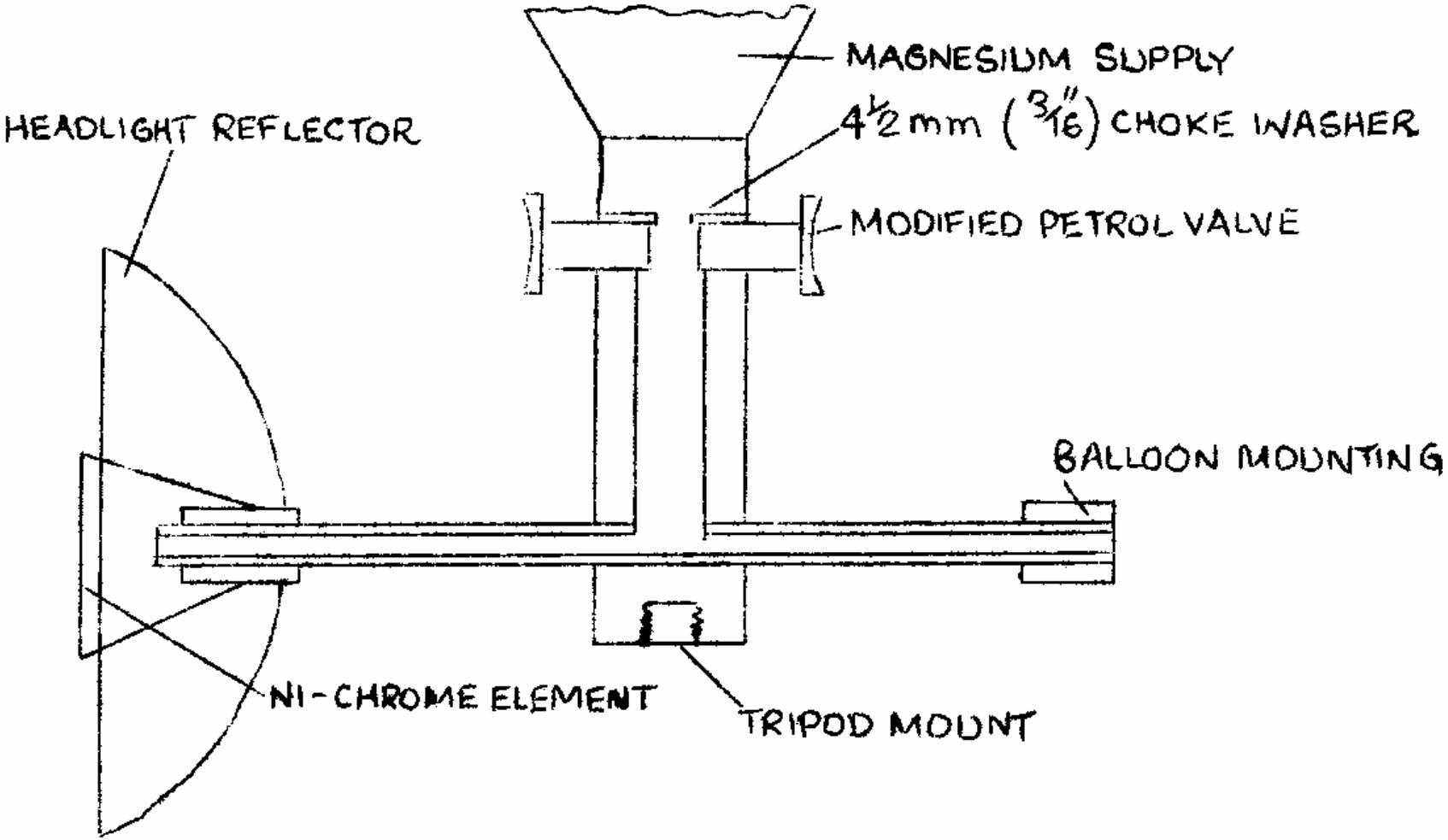
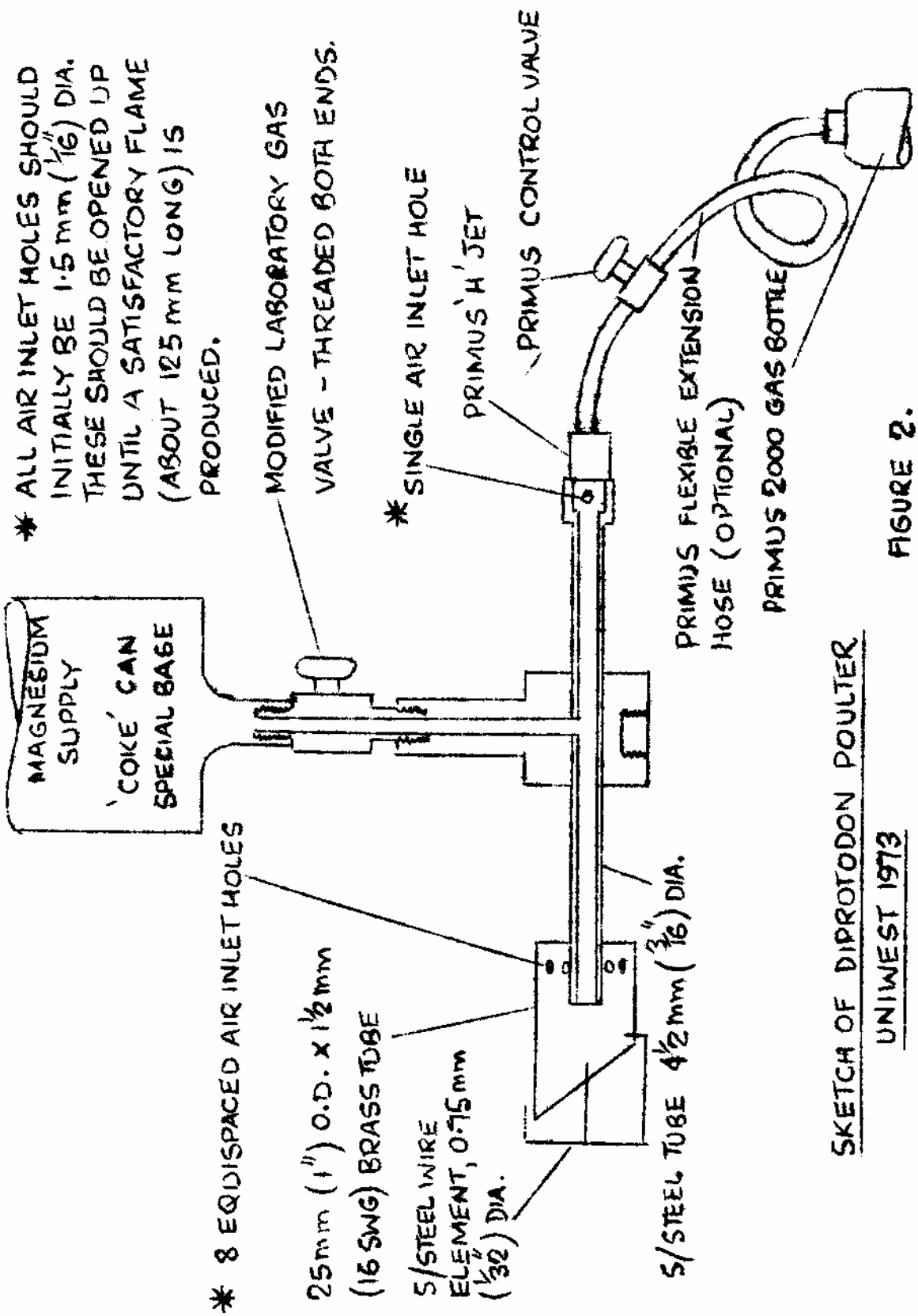


SKETCH OF DIPROTODON HILLI

FIGURE 1.



SKETCH OF DIPROTODON POULTER
UNIWEST 1973

FIGURE 2.

TRIP REPORT: S&R WEEKEND, NARACOORTE 1ST-2ND DECEMBER - B. DUNN

The weekend was fairly well attended for an S and R practice, with 12 people from Adelaide and 4 from Mount Gambler. This is still nowhere near the number of people we have on the S and R list, but it is a lot better than most previous practices.

Saturday morning was spent on a trip into S102. This cave has been neglected by the Group for some time and not too many present cavers have visited it. Crossing the lake caused some amusement, but everyone got across without too much trouble. The party left the cave after about 5 hours, having traversed all the main chambers and poked gingerly at some of the chokes.

After a late lunch, the new rescue stretcher was shown to the Mount Gambier team, whilst David Hawke and John Foulds erected a tripod over the Cathedral Cave entrance. This was to allow vertical lifts out of the cave to be practiced. Unfortunately, the tripod was not strong enough to take the simulated load of a body on a stretcher. Therefore the opportunity was taken to clear some of the accumulated rubbish from the cave and six sacks of assorted bottles and cans were removed.

Sunday morning the party moved out to Fox Cave for a rescue practice. The casualty (Anne Wilson) was located in a small side passage near the Madonna Extension. Injuries were diagnosed as a broken leg, with suspected foot injuries. First aid and strapping on to the stretcher was handled by the Mount Gambler team. In the meanwhile, the passage was being dug out to allow the stretcher and patient to be removed. This took nearly two hours. Negotiating the main passage took about ½ hour with no problems that could not be cured by more stretcher handling practice.

Getting the stretcher out through the Letter Box and the Slot into the entrance chamber proved to be extremely difficult. The Letter Box in particular was very awkward because of the very limited space available to the rescue team, the stretcher and of course, the patient. It would have been impossible to have taken a rigid stretcher through this part of the cave. However, because the stretcher used in this exercise could be unlocked, allowing it to be bent at the patient's hips, negotiating this part of the cave was possible - just, and took about 2½ hours. Once through into the entrance chamber, the surface was reached in 10 minutes. The whole exercise took 5¼ hours.

The new stretcher was found to be very good, although some minor faults were found. The sliding sleeves which lock the stretcher rigid quickly became covered with gritty mud, making them difficult to operate. For future use, a canvas drag sheet is being made, this will be fixed to the underside of the stretcher to reduce dirt pick-up. The manufacture of a portable tripod is also being considered.

The next practice will be early in the new year, as we cannot have too many of this type of exercise. Remember, you may one day be the patient, and a genuine one too! So if you think you do not need any practice, or you think we are wasting our time, come along and show the rest of us how expert you are.

P.S. Anne was a very good patient, but near the end was saying a silent prayer for a speedy exit from the cave and was last seen heading for the bushes at high speed!

TRIP REPORT: NARACOORTE 26TH - 31ST DECEMBER - G. GARTRELL

NO Naracoorte trip in memory has been quite like it, and none may ever be quite like it again. Big kids, little kids and tiny kids, big tents, little tents and tiny tents, big banana chairs, little sit-up chairs and tiny folding stools, big mosquitoes, big mosquitoes and even bigger mosquitoes, - and baby baths, pine needles and a few handfuls of dirt mixed with sticky melted iceblocks from the kiosk and you almost have the atmosphere. Truly it was a most enjoyable family-style camp. The Peisley family, the Galbreath family, the Gartrell family, and even a brief representation from the Jackson family, not to mention the newly-wed Sangsters with their giant economy size gas bottle, certainly outnumbered the singles, represented by Donna Spalding, David Sare, Bill Gamble and Sjoerd Van Der Harst (a Swiss caving contemporary of the Grimms who are well-remembered by cavers all over Australia. Incidentally Willi and Simone Grimm now have a little boy called Boris.) You will all be pleased to hear that a 1½m long brown snake was seen slithering across the floor of the hut, finally vanishing into a small hole near the sink. How many of its relatives also live in that hole we do not care to investigate. Several people have since slept in the hut without obvious ill-effects.

Out of all this confusion occasionally there straggled a small caving trip. A few long-held dreams were put to the test at last with the aid of one nice little generator to enable us to operate the jack-hammer in remote locations. Being careful to avoid setting the countryside on fire, and at the same time being extra careful to ensure that the exhaust fumes didn't roll into the cave entrance, the machinery was put into action at several key sites. Carter's cave was blowing its usual mild breeze, but would not give its secrets up lightly. The floor of the crawl is thick flowstone, and progress is mighty slow. On the other hand, the small cave that shall remain temporarily nameless, mentioned in the last newsletter, page 35, began by looking hopeless, but changed rapidly until at 10:20 p.m. one evening Vince Peisley pulled out the last boulder and crawled through to sit in a chamber. A large celebratory can of orange juice, followed by Grant Gartrell, David Sare and Edwin Galbreath soon joined him, and set off to explore. A small but striking chamber, pitch black, with short pendulum stalactites was appropriately dubbed 'Blackboy Chamber', but the next spot has yet to be christened. A chamber of ample roof height, perhaps 30m across, chock-a-block full of formation except for a viewing gallery around one edge, with numerous 2m long straws, big columns, a little water pool and some beautiful little white shawls against a black wall back-ground, it literally took hours to stroll around and take in the scenery.

The predictions in the last newsletter have been borne out by this chamber alone, and the gate must now go on in double quick time. Beyond this chamber one uncomfortable little squeeze leads into a huge rockpile chamber, with breezes here and there. A high level dig and chip gained access to a rather wild looking chamber on the far side of the rock-pile, with huge slabs propped against each other at crazy angles. Most of these should stay put if nobody leans on them but it is one of those chambers that remind you to feel that you should be careful. In the far corner of this chamber Ron Galbreath located the breezes, by this time all joined together into one medium size gale, blowing along a small flattener through heaps of rocks. Clearing of the rocks proceeded smoothly for a while, but one solid ledge in the floor finally stopped us. It is now slowly being chipped away by hammer and chisel, and the breeze ensures continuing enthusiasm. David Sare eventually managed to squeeze through this constriction into a chamber just big enough to turn around in, which he referred to as being somewhat rodent excreta. A fairly solid rock supported the immediate roof-slab (still within the rock-pile in the next chamber) and some chiselling would be needed to effect access to the small rock-pile cavity visible higher up, from which the strong breeze was blowing. If our luck holds the breeze will lead us into another big chamber. If not, the chamber is certainly there but we may not get into it this way.

It is hoped that we will be able to shed more light on it (sick pun) after the January long-weekend trip. At any event, the predictions about the significance of this cave system are only strengthened by the recent discoveries. It is plainly obvious that the vast majority of the cave is yet to be discovered. The chance that it consists entirely of chambers full of rocks and cracks is fortunately a slim one, which is somehow quite distinct from what used to be known as a 'fat chance'. Anyway, that's all folks. Tune in next Newsletter for the next breath-taking (squish squash gasp) episode.

Meanwhile over the road the cars kept pulling up. Over a thousand (what, cars? Ed) went through the caves on at least one day, and gave the impression that they ate 10,000 kiosk pies at the same time.

Peter and David organised a dusk visit to see the bats rise out of Bat Cave, and possibly 100 campers duly rolled along for this. After 3/4 hour waiting for the bats to emerge we suddenly came to realize that bats aren’t silly after all. They wait until the mosquitoes are good and full of tourist blood before they catch them. Saves most of that frantic flitting around.

So much for 1973.

TRIP REPORT – SELLICK'S HILL - 16.12.73

Trip Members:

J. Foulds (T.L.), D. Burke, E. Bailey, G. Pilkington, M. Meth, J. Clarke, A. Crichton, T. Bailey, T. Burke, J. Burke +2.

Aims of the trip were to continue the dig in the sinkhole to the south of Sellick's Hill Cave entrance and to investigate the cave itself for any change following earth tremors late last year. As well as this, a party completed a surface search to the east of the pipeline parallel to the coast.

The surface search turned up several possibilities in the area of a limestone quarry adjacent to the pipeline. Unfortunately, this area seemed to be inaccessible by vehicle due to the high density of "Trespassers Will Be Prosecuted" notices attached to gates in the area. The possibility exists for another day's hike over this area to pinpoint possible locations of new caves.

Meanwhile, back at the dig, things seemed to be running very smoothly when T.L. arrived ½ hour late after convincing everyone else that they should be on time. Ed was proceeding very nicely with a full supporting party when progress was halted by the typical Sellick's Hill type stone about 1m long, 0.6m wide at one end, pointed at the other and weighing X kg. Several attempts were made to lift it out, all of which failed despite the size of Ed's rope which was an adequate replica of a Queen Elizabeth II hawser. A little gentle persuasion will be required to break it up for easy removal. Despite this, at least 1m in depth was added, leaving only about 55m to go. More work is required here.

The trip into Sellick's Hill Cave was made by M. Meth, G. Pilkington and myself. As has been stated on previous occasions, it's a bit hairy and seems to be basically composed of rocks seemingly not held up by other rocks, the removal of any one of which-will more than likely result in a sudden disappearance of Sellick's Hill. Max again insisted on taking his "G" pick but thankfully did not succumb to the temptation of chipping away until we reached the bottom in the far end. Noticing that the cave went farther if we could just get through the rock pile, Graham started demolishing a boulder blocking the way, until it was found to be holding up the boulders we were sitting on, Worked our way back about 6m and found easy access to the extension could be gained with about 3 hours chisel work. More work required.

All in all a successful trip and a good day for all who attended.

Seen and Heard

Pilko: "That one just seems to be hanging there".

Max: "Yeah! Where's the "G" pick".

Foulds: Would probably be censored by the editor anyway.

D. Burke opening a can of apricots with a long trowel and a "G" pick. Patented method, apply for licence to above.

Ladders left in Sellick's Hill Cave for D. Burke and E. Bailey to trog down. Since they were too interested in the dig, M Meth, T. Bailey and J. Foulds last seen disappearing into Sellick's again to the tune of comments (probably censored by the editor) to fetch ladders out. (Max merrily musing on the possibilities of dropping rocks on the road in front of oncoming traffic.)

Pilko disappearing in a cloud of dust at the thought of having to go back and get the ladders.

A. Crichton last seen looking very matronly in somebody's green shirt about 5 sizes too big. It still needs a wash Annette!

LETTER TO THE EDITOR

Dear Sir,

Grant Gartrell's rather tongue-in-cheek article "Who said you can't see in the dark?" (Newsletter, 18(3): 36) was interesting but rather impractical. But it did bring to mind a useful phenomenon I have observed, that is rare and, I believe, unknown in the caves of South Australia's settled areas.

One weekday last August I was fortunate to arrive at Mammoth Cave, W.A. (as a tourist) just as the guide was about to leave in disgust. Being the only visitor, and disclosing my caving interests, he gave me a long and personalized tour of that fantastic cave. A stream (most important) flows in the entrance and disappears in the nether reaches. The first chamber is large and connects to the outside through a partly barricaded 5m wide opening. It is separated from a second, even larger chamber (over 30m floor to ceiling) by a large rockfall, at which point daylight is cut off. On the way out of this chamber after showing tourists the sights, the guide apparently makes a practice of turning out all lights, having warned his charges not to move. He did this for me, and we waited in the blackness for several minutes, after which time our eyes adjusted and it was no longer black, but dimly greenish-blue and one could see right across the cavern and pick out nearby objects. Only the depths of the chamber were still in blackness. (At this stage, visitors are on a landing about halfway up the right-hand wall). It is possible to walk out of the cave from this point with no light but this twilight, and on occasion the guide has done so.

Apparently, light from outside is reflected from the water in the creek up to the roof and back, possibly several times. We saw none of the moving reflections typical of direct light on running water, so some other factor must also be involved. In addition, in summer when the creek stops flowing and is nothing more than a bed of wet mud, the phenomenon still occurs. It also does not matter what the weather is like outside (it was overcast and raining while I was there), but the guide was not sure what the situation would be at night. However, I think that on a bright, moonlight night one would still be able to negotiate the path and get out of the cave.

It seems that the stream is a vital component of this lighting system, which is why none is known in South Australia.

Neville Pledge

BRIEF REPORT ON HUMAN REMAINS IN WOMBAT CAVE, NARACOORTE, S.A, - DAVID JACKA (TRARALGON, VICTORIA)

When this cave was being visited (December 9th - 11th, 1973) to investigate unexplained, engravings within, an aboriginal skeleton was found strewn over an area of rockfall and sediment floor of the entrance chamber. This partial skeleton was mostly randomly scattered, suggestive of accidental deposition, but some of the bones had been humanly re-arranged: the pelvis was up on a rock ledge next to a kangaroo pelvis and jaw, also skulls of possums, and the (R) radius and the (L) humerus were carefully arranged suggestive of forearm anatomy. Someone - almost certainly a caver - had removed or rearranged much of the skeleton; despite the protected bone dig in progress only a few feet from most of the remains.

The bones recovered were two innominates, two radii, two humeri, a (L) femur, a (R) tibia, a thoracic vertebra, a manubrium, a (R) metatarsal, and slightly more than the right half of the mandible. Most of the bones showed evidence of post mortem infestation with maggot - like larvae. The extensive tooth wear, yet un-erupted wisdom tooth indicated, with pelvic anatomy, the aboriginal to be male, aged in his early twenties on a very gritty diet, or aged in his middle thirties with an un-erupted (R) lower 3rd molar.

It is commonly surmised in the Naracoorte area that the caves were used as deliberate refuge by aborigines during affrays with settlers. This is unlikely to have applied to the Wombat Cave whose structure makes it a trap rather than a refuge. It is an open cavity within the forest and could easily claim a victim unawares. Having fallen in, escape unaided would he almost impossible. The presence of this unfortunate man, like that of the many animals whose bones still strew the cave floor, can be fairly convincingly put down to mishap.

If any cavers have any knowledge of the whereabouts of any missing parts of this skeleton, their surrender for addition to those already rescued would be greatly appreciated by the South Australian Museum. Cavers note: limestone formations are not the only things in caves worthy of careful protection and study - aboriginal activity of long ago is becoming recognised as a feature of many S.A. caves.

"Communicated by Graeme Pretty (South Australian Museum) on behalf of the South Australian Museum Volunteer Archeological Group".

NOTE:

There is no three months programme in this issue. The programme for March and April will be arranged by your new committee, to be elected at the Annual General Meeting, which will be held on Wednesday 27th February 1974. Don't forget to turn up!