

CEGSA NEWS



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CAVE EXPLORATION GROUP (SOUTH AUSTRALIA) Inc.

PO Box 144, Rundle Mall, South Australia, 5000.

<http://www.cegsa.org.au>

Meetings held on the fourth Wednesday of each month, except December, at 7.30 PM usually in the Royal Society of South Australia meeting room, Natural Science Building, South Australian Museum.

2010 Committee

| | | |
|---|-------------------|---|
| President | Mark Sefton | (H) 8277 9086 (W) 8313 0096 (E) seftons@adam.com.au |
| Secretary / Public Officer / Library & Records | Graham Pilkington | (H) 8395 6713 (W) 8395 6713 (E) p-c-h@bigpond.net.au |
| Treasurer / Membership | Chris Gibbons | (H) 8258 9847 (E) ragchg@bigpond.com |
| New Member Liaison | Marie Choi | (H) 8322 0895 (M) 0429 696 299 (E) mariechoi@adam.com.au |
| New Member Liaison | Ian Lewis | (H) 8295 6582 (M) 0427 284 051 (E) kanawinka1@yahoo.com |
| | Ken Smith | (H) 8271 7064 (W) 8375 1946 (M) 0407 603 118 (F) 8350 0188 (E) kendiver@gmail.com |
| Museum Representative | Neville Pledge | C/- SA Museum |

Other Office Bearers

| | | |
|---|----------------|---|
| Publications / Trip Log Book / Website Coordinator | Athol Jackson | (H) 8337 8759 (E) atholjax@adam.com.au |
| Landowner Liaison (records) | Garry Woodcock | (H) 8380 5154 (E) woodcock.gary@saugov.sa.gov.au |
| Quartermaster / Key & GPS Holder | Paul Harper | (H) 8297 8878 (W) 8222 5615 (E) paul.harper@health.sa.gov.au |
| Search & Rescue Co-ord | Harry Harris | (H) 8431 5395 (W) 8273 5666 (E) docdive@bigpond.net.au |
| Training / Safety Co-ord | Tim Payne | (M) 0448 147 927 (W) 8259 5724 (E) payne.tim@bigpond.com |

Area Coordinators

| | | |
|--|-------------------|--|
| Eyre Peninsula, Murray Mallee, Gawler Ranges, Torrens, Pitjandjara lands, NW of SA | Records Officer | As Above |
| Upper & Lower S E(dry), Glenelg River | Kevin Mott | (H) 8723 1461 (W) 8735 1131 (E) jkmott@internode.on.net |
| Lower South East(wet) | Peter Horne | (H) 8295 6031 (E) ppuddles@yahoo.com.au |
| Adelaide & Kangaroo Is. | Grant Gartrell | (H) 8556 9100 (E) blueberrypatch@bigpond.com |
| Nullarbor Plain (SA & WA), Yorke Peninsula | Graham Pilkington | As Above |
| Flinders | Eddie Rubessa | (H) 8336 4775 |

Representatives

| | | |
|---|-------------------|---|
| ASF | Graham Pilkington | As Above |
| SA Speleological Council | Graham Pilkington | As Above |
| The Nullarbor Karst Project Steering Committee of Western Australia | Paul Hosie | (H) 08 9259 5815 (M) 0428 992 109 (E) paulhosie@trimixdivers.com |
| Kanawinka Geopark Liaison | Ian Lewis | As Above |

Cover Photograph: Engelbrecht's Cave Entrance.

Photo: Ian Lewis.

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QUARTERMASTERS NOTE.

High usage equipment will now be stored at the quartermaster's residence. Please make arrangements with the QM well in advance of required date for equipment. The QM can be contacted at the telephone numbers on the previous page.

NEWSLETTER MATERIAL

The deadline for copy for Volume 55 Number 3 (Issue 219) is Wednesday 11th AUGUST 2010. Material not meeting this deadline may be retained for possible use in a following issue. The preferred method is via E-MAIL to atholjax@adam.com.au as an attachment or on CD or 3.5" IBM floppy disk, in Word or ASCII text format. Do not embed photos in text; send as separate files with notes where to put photos. Photos are preferred to be in colour (jpg format). Of course other forms of communication will still be gratefully accepted.

The views expressed in this publication are those of individual authors and not necessarily those of the Cave Exploration Group (South Australia) Inc., its Committee or the Editor.



PRESIDENTS SPOT

In its more than 50 year history, CEGSA has produced over a thousand cave maps and a vast amount of other data in various forms. A few of our stalwarts, Graham Pilkington, Fred Aslin and others have spent a considerable amount of their time and energy putting these records into digital form. Records kept on paper can be easily lost or subject to deterioration. Not only will this process ensure that they are protected for the future, the information will be much more easily accessed by our members. I was delighted at the unanimous support at our last General Meeting for a proposal to spend up to \$2500 to facilitate this process. The maps that will be copied include many that are now very fragile, on large sheets (e.g. A0) and not suitable for circulation. An example was brought to our last meeting. I, for one, am looking forward to being able to see many more examples of the work of our past members from my computer and being able to print copies to take with me into the field on future trips.

Mark Sefton.

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Notice of motions to amend the Constitution

It is proposed to alter our Constitution by:

Adding

Clause 3(f) A member may resign from membership of the Group by giving written notice to a Committee member. Any resigning member shall be liable for any outstanding subscriptions or fees which may be recovered as a debt due to the Group. On resignation, all assets belonging to the Group that are held by the member shall be returned forthwith.

Amending by adding the second sentence

Clause 8(d) If Annual Subscriptions remain unpaid after the expiration of three months from the due date then membership shall cease except at the discretion of Committee. Lapsed membership shall be treated as a resignation as per Clause 3(f).

Adding

Clause 9(h) The Group shall have all the powers conferred by section 25 of the Associations Incorporation Act providing that any power used does not conflict with any other clause of this Constitution.

Clause 3(f) is to define how to resign from being a member as is suggested by the Associations Incorporation Act.

The reason for adding 9(h) is because the Office of Consumer and Business Affairs no longer considers it adequate to simply follow the Act. The Constitution must now “include the powers of the association with sufficient detail”.

Section 25 of the Act is as follows:

25. For the purpose of carrying out its objects, an incorporated association may, subject to this Act and its rules-
 - (a) acquire, hold, deal with, and dispose of, any real or personal property; and
 - (b) administer any property on trust; and
 - (c) open and operate ADI (Authorised Deposit Taking Institution) accounts; and
 - (d) invest its moneys-
 - (i) in any security in which trust moneys may, by Act of Parliament, be invested; or
 - (ii) in any other manner authorised by the rules of the association; and
 - (e) borrow money upon such terms and conditions as the association thinks fit; and
 - (f) give such security for the discharge of liabilities incurred by the association as the association thinks fit; and

- (g) appoint agents to transact any business of the association on its behalf; and
- (h) enter into any other contract it considers necessary or desirable.

In the above section of the Act the term "rules" refers to our Constitution not our "Rules" of conduct. Also note that our Constitution 4(e) empowers the Committee to conduct and manage the affairs of the Group; 9(b)(i) relates to only using ADI's for general accounts; 9(b)(ii) vaguely covers real estate etc.; and that 9(g) states that any purchases or sales must relate to caving or speleology.

Because of a significant amendment made at the March GM to the proposed Constitution Clause 5c (vii), the proposal is being resubmitted for approval. The Motion to be put is that Constitution Clause 5c (vii) be replaced with:

"The Publications Officer shall prepare in collaboration with appropriate officers, an information bulletin containing reports on previous activities and a program of meetings, trips and social events at no greater interval than four months. The Committee may at their discretion require that they approve the bulletin prior to publication. He or she shall also be responsible for the preparation and or publication of other material as directed by and at the approval of the Committee"

These motions are to be voted upon at the General Meeting to be held on June 23rd 2010 or at the next subsequent General Meeting that has a quorum if a quorum is not present.

Graham Pilkington
Public Officer

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Cave man?? (long joke but worth it)?

There once was a Caveman whose given name was "Onestone", so named because he had only one testicle.

He hated that name and asked everyone not to call him Onestone!

After years and years of torment, Onestone finally cracked and said, "If anyone calls me Onestone again I will kill them!"

The word got around and nobody called him that any more.

Then one day a young woman named Blue Bird forgot and said, "Good morning, Onestone..." He jumped up, grabbed her and took her deep into the forest where he made love to her all day and all night. He made love to her all the next day, until Blue Bird died from exhaustion.

The word got around that Onestone meant what he promised he would do.

Years went by and no one dared call him by his given name until a woman named Yellow Bird returned to the village after being away for many years.

Yellow Bird, who was Blue Bird's cousin, was overjoyed when she saw Onestone. She hugged him and said, "Good to see you Onestone."

Onestone grabbed her, took her deep into the forest, then he made love to her all day, made love to her all night, made love to her all the next day, made love to her all the next night but, try as he might Yellow Bird wouldn't die!

What is the moral of this story?

'OH, 'Come on'...take a guess!

Think about it ..

?????

?????

And the moral is ..

...You can't kill two birds with one stone"
(C'mon that was funny !)

TRIP REPORTS

The Turner Rockholes, Nullarbor Plain

Part 3: April 2007

Trip dates: 8 April – 4 May 2007

Party: Peter Ackroyd and Ray Gibbons.

Introduction

In part 1 of this series I gave a brief history of the high precision search for, and survey of Nullarbor rockholes carried out by Western Australian surveyor G. R. Turner in 1885 (Ackroyd, 2009). Part 2 described Ray Gibbons' and my attempt, in April 2006, to follow in Turner's footsteps. During that trip we relocated and documented 34 of the 90 features that Turner and his party had recorded (Ackroyd, 2010). The aim of the current trip was to find the remaining 56 Turner features.

Seven weeks before our planned departure, Ray suffered a heart attack and had a stent fitted to his main coronary artery. When Ray asked his surgeon about the advisability of continuing with our proposed Nullarbor trip, his surgeon replied, "You should do what you normally do". So, we continued with our plans and left on 8 April 2007.

Catching Up

That night we stayed with Max and Hennie Meth at Ceduna. From Ceduna, we made our way to the north-eastern corner of the old Moopina Station, north of Eucla. The fence is now no more than wires lying on the ground and a few posts, but we were able to make our way south along the overgrown fence track till it became dark, whereupon we made camp.

I had last followed this route on 7 May 1994, ultimately reaching a blowhole (N-976) originally recorded by Harry Wheeler in 1964 as QW-219 (Wheeler, 1952 – 1980). Wheeler had not been able to explore this tight, fairly deep blowhole in 1964, and neither had I in 1994. Wheeler's reason was that he was on his own. Mine was that I had found the feature almost on sunset and our party had to return to camp.

Having waited 13 years to descend it, I was prepared to wait for the next day, and so we passed a pleasant, if slightly showery, first night on the Nullarbor. The following morning we revisited other features from the 1994 visit in order to record more precise coordinates for them, before arriving at N-976. A 12m ladder climb resulted in a disappointing blind hole with some "black" stalactites (Nullarbor calcite is often stained dark brown from ancient humus). We returned along the fence line to our campsite.

The following morning we returned to Eucla, then drove west along the highway to 10 Mile Point in order to relocate a well, noted as being in the gully behind the point by W. R. Evans in 1905 (Evans, 1919). Evan's photo caption indicated the well was constructed by a Eucla store owner, F. W. Beare, and that it was 150 feet (45m) deep. The well is still in remarkably good condition. We measured its current depth — 42m. The spoil around the well shows it had penetrated to the Wilson Bluff Limestone, with many chert nodules brought up by the well diggers.

The next project was to relocate a couple of rockholes not recorded by Turner at all, but by an earlier surveyor, C. D. Price, in 1877. Price's job had been the surveying of the route for the telegraph line, and in the process he had noted several rockholes. Turner had surveyed to most of these, but had missed two. I had examined Price's original survey plan at the Western Australian State Records Office on 15 June 2006. This drawing is on a linen drafting sheet over 2m long (Price, 1877). From it I had scaled the distances of the unknown rockholes from known rockholes and thus determined their approximate locations.

We walked into the cliff-line to search for the rockholes. After some time, we found two sets of smallish rockholes that matched Price's description, and which we tagged N-3953 and N-3954.



Ray Gibbons at the remains of a dry-stone fence constructed up the cliff in the early 1880s on Madura station.

Photo: Peter Ackroyd, 27 April 2007.

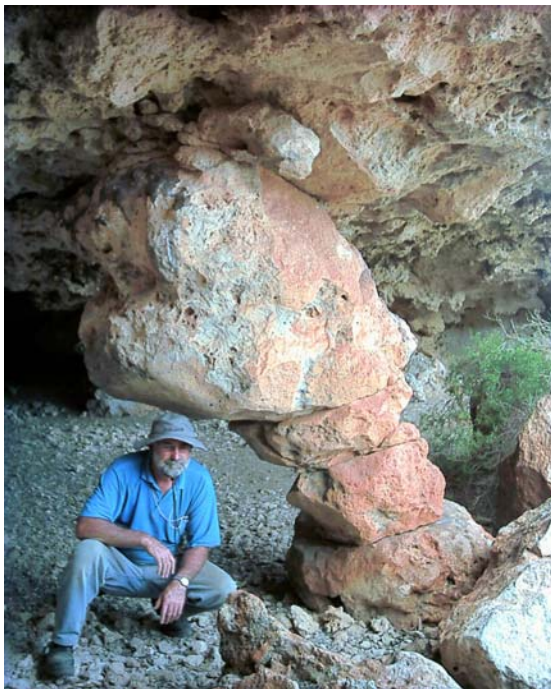
Our non-Turner work was now complete, so we drove west to Madura Pass Motel, where the managers of Madura Plains Station had kindly left for us a map showing all the gates and fences on the property. From Madura Pass, we drove south-west along the old track, which had also been used by Turner in 1885, to the original Madura Homestead, now in ruins. A few kilometres further south-west was a dry-stone fence heading straight up the cliff. The fence had been part of early construction by the Madura property owners and represented a significant amount of work. Due to the precision of Turner's survey, we were able to walk virtually straight to it.

From the old Madura Homestead ruins we continued driving south-west along the track until we reached Olwolgan Bluff, the furthest point we had reached on our previous trip, and camped for the night.

Turner Rockholes — At Last

On 14 April, after the daily ritual of computer and paperwork, we commenced searching for our first new Turner features, Norina Rockhole (N-1975), and Norina Cave (N-298). On our walk up the cliff, we found another rockhole, which we called Bulls Head Rockhole, due to its shape in plan view, and which we subsequently tagged N-3955.

Norina Cave, turned out to be a really nice feature with a well sheltered aspect. In it we found a rather spectacular segmented pillar and an area of calcite which had very old, partially re-calcified, grooves cut into it — either to sharpen tools or possibly to extract the white calcite powder for body painting.



Ray Gibbons at a bedrock pillar in Norina Cave (N-298).

Photo: Peter Ackroyd, 14 April 2007.



Grooves, possibly tool sharpening marks, cut into calcite and then re-calcified, Norina Cave (N-298).

Photo: Peter Ackroyd, 14 April 2007.

In this part of the cliff we also found one of the Turner's "permanent" survey marks, cairn number E-20. We didn't know it at the time, but E-20 was the last intact permanent survey mark of Turner's we were to see.

West of Norina Cave, considerable modification of rockholes had been undertaken by early settlers. William Graham, lessee of Burnabbie area and telegraphist at Eyre, was particularly active in this regard. This activity appears to have had a deleterious effect on Turner's survey cairns.

Of the remaining Turner cairns (E-21 to E-25), E-21, near Yudenda Rockhole (N-3957) was missing — its rocks possibly incorporated into a built-up mortared lip on the down-slope side of the rockhole.



Ray Gibbons at Yudenda Rockhole. Note the man-made lip on the downslope side.
Photo: Peter Ackroyd, 14 April 2007.

From Norina Cave, Ray and I continued to track down Turner's rockholes, heading towards Burnabbie. Cologna Rockhole (N-1956), located on the very top of the cliff, is a collection of four rockholes, three of them quite sizeable. The remains of a semi-permanent camp and a fairly well preserved dry-stone walled sheep pen were found here.



Ray Gibbons at a dry-stone walled sheep pen, adjacent to Cologna Rockhole (N-1956).
Photo: Peter Ackroyd, 15 April 2007.



Ray Gibbons on the cliff-top at Turner's cairn E-20.
Photo: Peter Ackroyd, 14 April 2007.

Further along, cairn E-22 was missing its central post and cairn E-23, near Narilya Rockhole (N-3962), had tumbled down. Cairn E-24 had been built near Burnabbie Rockhole (N-904). There has since been extensive weir construction in the gully (see photo below) and the cairn was nowhere to be found. Cairn E-25 was still in situ, but was missing its central post.

Turner's remaining "permanent" marks, E-26 to E-41, were all inland from the cliff and consisted of marked trees. During this trip we looked for several of them but found nothing. We deduced that they had all probably died, or been burnt in bushfires, after the passing of 122 years.



Death Adder (*Acanthopsis antarcticus*) found at Blackadder Hole (N-3959).
Photo: Peter Ackroyd, 15 April 2007.

We recorded the Cologna area in some detail. By the time we scrambled down the gully to the car it was close to nightfall. We drove a few kilometres further south-west along the bush track to make camp next to a doline containing drafting holes and, as it turned out, a death adder. We very carefully tagged this feature N-3959 and named it "Blackadder Hole".

On 16 April, we continued south-west along the cliff-line track relocating Turner features, and also finding a pair of blowholes of our own (N-3961). In the late afternoon we found and made a full record of a previously known cluster of rock shelters, N-306, near which we saw a monk snake (*Parasuta monachus*).

On the following day we reached Turner's 41st feature, Burnabbie Rockhole (N-904), and the nearby Burnabbie Rockshelter (N-305). A weir, about 20m long and 1.5m high, had been built across the gully above the rockhole.



Ray Gibbons at a largely intact weir above Burnabbie Rockhole.
Peter Ackroyd, 17 April 2007.

From the weir an old pipe led down to a small house at the bottom of the cliff. The house, measuring a mere 4m by 2.5m had been constructed of lime-mortar and rubble. It had completely collapsed.

This was an interesting area, with a track along the cliff-top, probably made by the crew installing the nearby Optus telecommunications cable. This cable, as thick as an arm, snaked its way down the cliff where it was not so steep.

Further to the south-west we struck sandy conditions for a few kilometres before reaching Burnabbie, which had once been leased by William Graham of Eyre. From Turner's notes it is clear that Graham had already carried out some improvements (fences and tanks) prior to Turner's arrival on 12 June 1885.

When Turner arrived at Burnabbie something peculiar seems to have happened. Turner's notes indicate that the next surveying day did not occur until 19 June and, moreover, the survey jumps from Burnabbie to the Eyre telegraph station, some 13 km to the south.

Within that seven day gap there is a flurry of telegrams, all on 15 June 1885, between Turner and his boss, John Forrest. The first telegram is a short note from Turner to Forrest, stating that he had arrived at Eyre and intended travelling inland (State Records Office of Western Australia (1885), item 1885/85). Forrest's reply asks precisely what Turner intends doing. Turner's response is that he knows there is a 700 gallon rockhole "40 miles NNW of Eyre", and that he would like to "try to reach Giles' track" (State Records Office of Western Australia (1885), item 1889/85). Forrest's reply is quite lengthy, but to the point (State Records Office of Western Australia (1885), item 1890/85):

*G. R. Turner Esq
Eyre Station*

The work I wish performed is real surveys, and therefore fixing of all rockholes likely to be useful to lessees between Eyre and Eucla. If, in addition to this, you can go inland for a few days and describe the country, I approve but your work is survey not exploring and it would not do to take more than two or three weeks for exploring. If you can traverse [survey] inland to rockholes it will be a good thing but you must leave well defined and easily recognized marks. You can assist Mr Graham by fixing or examining his improvements before starting on any trip. Other than traversing you should be able to fix many rock waters between Eyre and Eucla inland.

*John Forrest
Commissioner of Crown Lands
15 June 1885*

So, on 12 June 1885, Turner and his party had reached William Graham's lease at Burnabbie. The 700 gallon rockhole 40 miles NNW of Eyre Turner refers to in his correspondence is, I believe, Yayouldle Rockhole (N-840), a collection of three major rockholes and several smaller ones. Yayouldle Rockhole was already well known to local pastoralists. According to Turner's notes, William Graham had constructed a track to this rockhole — a track still able to be followed today (see below). It seems likely that William Graham had guided Turner along this track to Yayouldle Rockhole so that Turner could see for himself the country and the nature of the rockhole. This appears to have happened on two of the "missing" days, 13 and 14 June. "Giles' track" was the east to west route followed by Ernest Giles in 1875 across the Great Victoria Desert. It is at least 250 km (155 miles) north of Eyre (Dutton, 1974). To reach it one would have to cross the whole of the Nullarbor and part of the Great Victoria Desert.

It appears that Turner has had a burst of exploration fever. However, John Forrest, though himself a Nullarbor explorer in the 1870s, clearly wanted Turner to concentrate on surveying in order to locate water sources for pastoralists. Therefore, on 19 June 1885, after having recorded the improvements on Graham's lease at Burnabbie, and having engaged a new native guide, Turner and his party recommenced the survey, heading slowly northwards towards Yayouldle Rockhole. At Yayouldle, he turned east and started to head back towards Eucla.

We did likewise, first pausing at Burnabbie ruins, admiring its classic bush carpentry, especially the use of fencing wire to make nails.



Ray Gibbons at Burnabbie ruins.
Peter Ackroyd, 17 April 2007.

We continued west along the cliff, seeking a rockhole noted only in Edward Compton's field book, Turner having apparently missed it. Compton, being Turner's chainman, did not have a bearing to the rockhole, only an offset from the main traverse, however we were able to find and tag it (N-3963).



Close-up of fencing wire used as a nail at
Burnabbie ruins.
Peter Ackroyd, 17 April 2007.

The final rockhole in the cliff recorded by Turner's party was Yarrabie Rockhole (N-898), a relatively small pair of rock holes with a total capacity of only 130 litres, but remarkable for being on a steeply sloping pavement area, about two thirds of the way up the cliff.

Turner's traverse turned to the north at this point, but we had to drive a few kilometres along the old 1896 telegraph route before climbing the cliff line at Yarrabie Pass. When we arrived at the top we found a sign that indicated we had been very naughty for not using a 4 wheel drive.

We were now on the Nullarbor Plain proper and were following Turner's route, initially to two known rockholes Moondadong (N-567) and Cocklebidy (N-576). Both these rock holes have been extensively enlarged by blasting, Moondadong in particular. Cocklebidy has a large rock tank constructed alongside it. In between these two rockholes Compton had noted a blowhole/doline field,



Ray Gibbons at sign above Yarrabee Pass.
Peter Ackroyd, 18 April 2007.



Ray Gibbons at Graham Rockhole (N-896).
Peter Ackroyd, 20 April 2007.

which we tagged N-3966. We spent the night of 19 April in the relative luxury of Cocklebiddy Motel, enabling us to have a shower and wash some clothes. I was also able to phone the manager of Arubiddy Station, as prearranged, and he very kindly offered to meet us at Cocklebiddy Motel to lead us along the original William Graham track to Yayouldle Rockhole.

This track passes through the original Cocklebiddy Station (now incorporated into Arubiddy Station) close to a completely man-made rockhole, Graham Rockhole (N-896). It is presumed that this rockhole was originally created by William Graham. It had been constructed by blasting a hollow in a large pavement area.

A few kilometres south of Yayouldle Rockhole, we reached the northern boundary fence of Arubiddy Station, where our guide left us and we passed on to Madura Plains Station, access to which we also had arranged in advance. We continued to Yayouldle Rockhole, documented and tagged it (N-840), then headed back to Graham Rockhole (N-896) in order to document that feature more fully.

Afterwards, we turned north-east in order to check out the original Cocklebiddy Homestead ruins. Adjacent to the ruins was a blowhole recorded by Harry Wheeler in February 1958 (Wheeler, 1952-1980, QW-157). On the basis of Wheeler's record, this feature had apparently been allocated the number N-822 in the early 1990s, sight unseen. When we carefully checked the available data we discovered that it had already been allocated an earlier number, N-158. This is the number we stamped on the tag now glued to its entrance.

Back on Turner's trail, we found we were on another old road, named by Harry Wheeler as the East-West Road. This track is almost certainly a continuation of the Old Coach Road, as it is called further to the east. The track simply travels from rockhole to rockhole, almost all of them logged by Turner.

A series of fences, constructed on Madura Plains Station around 1969, has made the old East-West Road very hard to follow (Wheeler, 1952-1980, see note under QWRH-22). Several times we had to deviate up a fence to a gate then drive back down the other side of the fence to rejoin the track. The worst such case necessitated a total detour of 11 km.

However, we persevered, driving eastward and relocating each of Turner's features, including a "landslip" (doline) 35m in diameter (N-134). A few rockholes were not precisely fixed by Turner's survey, but positioned only with the aid of compass and estimated (horse) distances, for example Wodawun Rockhole (N-3970). Our use of satellite imagery was helpful in these circumstances. Mostly, however, we were able to go straight to the major rockholes using coordinates derived from Turner's data.

We also took the opportunity to locate accurately a few features recorded by Harry Wheeler. When he drove over the old East-West Road in the late 1950s and early 1960s he recorded many of the

rockholes that had originally been logged by Turner but he also found some features of his own (Wheeler, 1952-1980).

Turner's steady progress to the east was interrupted about 22 km beyond Karulbie Rockhole (N-3971). Apparently he had run out of rockholes and had no water for his horses. He was forced to backtrack on 12 July 1885. He then returned to Eucla. On 27 July 1885 he started from Woodella Rockhole (N-982), 15km north of Eucla, and headed west in an apparent attempt to link up with his previous survey.

He did not quite get back to his original survey, falling short by just a few kilometres, defeated again by lack of water north-west of Madura Pass. However, he did complete two enormous loop closures in his survey, giving a precision of about 1 m error for every 5 km traversed (Ackroyd, 2009).

For our purposes, however, knowing where Turner had been, and not being limited by our horses requiring water, we continued heading east. We soon picked up the end-point of Turner's easterly traverse, Boering Rockhole (N-3978), which we found was within 20m of the position I had computed from Turner's data. Mostly, we found that Turner's data put us within 100m of the feature but sometimes, such as in this case, he placed us much closer.

Near here was Turner's station E-41, a "marked mallee". Most of his marked trees on the plain had been sugarwoods (*Myoporum platycarpum*) or pittosporums — both relatively short-lived trees. However, I thought a mallee may have survived, so we walked up the slight rise to where the tree was supposed to be. As we walked we noticed an ominous jet-black cloud bank approaching. It was a race. We reached the tree site to find nothing more than a few burnt bits of wood from what had evidently been a large mallee. The thunder storm hit. The noise was deafening. The 2cm diameter hail stones were really quite painful and, though the storm only lasted five minutes, we ended up bruised, battered and drenched to the skin.

The following day, 27 April 2007, was overcast but generally fine. Turner had made one more attempt to head north into unknown territory, and so we headed north-east from Madura Pass area, via a series of rock holes, towards Carujie Rockhole (N-792). On the way we found a ram, caught by its horns in a fence. After we carefully set it free, it wobbled off, a bit tired but otherwise okay. It appeared to have been stuck there for a day or two.

Upon reaching Carujie Rockhole (N- 792), we found it to be where Turner said it would be, but 2.0 km away from where the map said it would be. This, however, was not the largest map error we found (see appendix 2). The cartographers had access to exactly the same data that I had used, so it is a little puzzling as to how such large errors could have crept in.

We reached Turner's furthest northern point on this survey loop, Talganna Rockhole (N-3983), and then we turned south-east, following the traverse towards the eastern boundary of Madura Plains Station. On the way, we visited two known features, N-194, Philistine Flattener, and N-1476, a huge,



Ray Gibbons at flooded doline N-1476.
Peter Ackroyd, 29 April 2007.

shallow doline, completely flooded when we saw it.

This area also showed how, in a good season, the Nullarbor can be very inviting — new green growth was everywhere.

We were now on Mundrabilla Station, again having arranged permission in advance. In this area, on my first Nullarbor trip in 1994, I had found three of Turner's rockholes using a small sample of his original survey notes that happened to be available to me at the time (Ackroyd, 1998). These were Yelangurra Rockhole (N-1196), Thampanna Rockhole (N-1190), and Yalganimirra Rockhole (N-1194). It was the successful rediscovery of these three rockholes that eventually led me to undertake the current project.

Now, with Ray, I was about to revisit them. In 1994, Max Meth and I had cleaned out all soil from the rock holes and repacked them with rocks in the traditional manner. Ray and I found each of these three rockholes held water after the recent rains. We also found that, despite the passage of 13 years, the rock holes were remarkably free of silt — the packed rocks had kept most of it out.

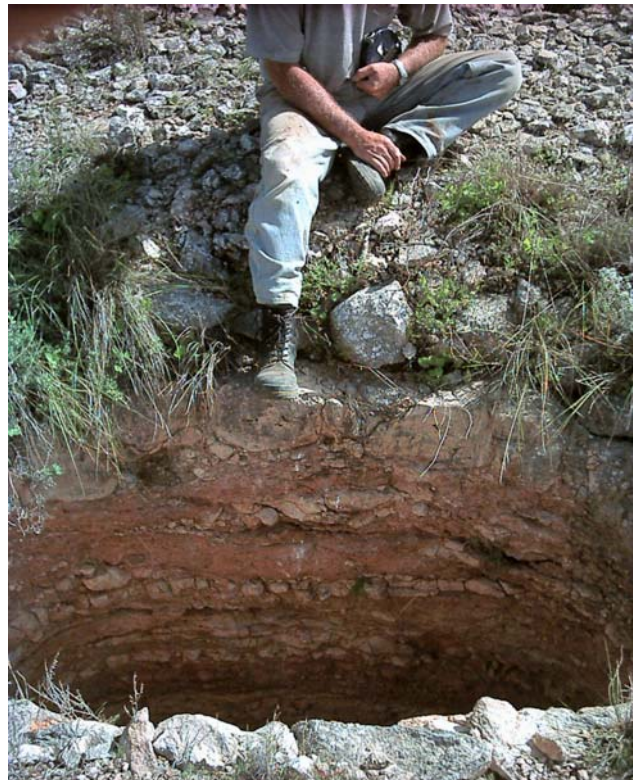
The next rockhole on the list was Kardamindra Rockhole (N-3987), a moderately large rockhole not far from the track. Originally this name had been applied to N-740 by a group of cavers in 1993. However, N-740 is a quite small rockhole, 750m to the north of N-3987. Turner's data had led us straight to the correct rockhole.

On 1 May 2007 we called in at Mundrabilla Homestead to settle up camping fees and to let the leaseholders know the results of our work. In order to finish off our Turner work, we had only to follow the Old Coach Road east to pick up most of the remaining features, with one notable exception.

Bultanna Rockhole (N-4000) had remained elusive for many years, not least due to its incorrect map location. Turner's figures took us straight to the rockhole once more.



Ray Gibbons at Bultanna Rockhole (N-4000).
Peter Ackroyd, 2 May 2007.



Ray Gibbons at well N-3989. Note layered kankar
and paleosols.
Peter Ackroyd, 2 May 2007.

His data also led us to a beautifully excavated well, 2m by 1m by 15m deep. The sides of the well have exposed layers of kankar and paleosols.

We were now very near the end of our trip. Most of the Turner features had been fully documented and the remaining half dozen were well known, although a surprising number of them had no tag. This was rectified, and additional data collected, to complete the Turner rockhole survey re-enactment by 1pm on 3 May 2007. That night we were in Ceduna, and the next in Adelaide.

In Conclusion

A total of 90 Turner features were identified by me during the computation stage. We have been able to relocate all of these features in the field. Turner had not fixed some of them by conventional survey methods, rather by approximate methods such as a compass bearing and distance by horse. However, even these few had been found, sometimes with the aid of satellite imagery to confirm likely sites.

Turner had traversed, using a theodolite and a two chain steel band, 988 km of survey, no doubt covering at least this distance again in order to effect the survey. For comparison, our two trips, undertaken in October 2006 and April 2007, resulted in a total distance travelled in our cave and feature search of 1,607 km, almost all of this on rough or very rough tracks.

Turner and his party spent six months on the Nullarbor, during which they were occupied almost full time in traversing. Our two months spent repeating their work only confirmed in our minds just how determined and hardy those early explorers were.

Appendix 1: Listing of features examined and karst numbers allocated

New 'N' numbers allocated, tagged and documented:

N-3953, N-3954, N-3955 (Bulls Head Rockhole), N-3956, N-3957 (Yudenda Rockhole), N-3958 (Cildida Rockhole), N-3959 (Blackadder Hole), N-3960, N-3961, N-3962 (Narilya Rockhole), N-3963, N-3964, N-3965, N-3966, N-3967, N-3968 (Wothella Rockhole), N-3969, N-3970 (Wodawun Rockhole), N-3971 (Karulbie Rockhole), N-3972, N-3973, N-3974 (Walungee Rockhole), N-3975 (Scaddans Rockhole), N-3976, N-3977, N-3978 (Boering Rockhole), N-3979 (Karlabi Rockhole), N-3980 (Cargolee Rockhole), N-3981, N-3982 (Kaleuna Rockhole), N-3983 (Talganna Rockhole), N-3984 (Carlunimungle Rockhole), N-3985 (Undawidgi Rockhole), N-3986, N-3987 (Kardamindra Rockhole), N-3988, N-3989, N-3990, N-4000 (Bultanna Rockhole).

(Total = 39)

Existing 'N' numbers visited, data collected and feature tagged (when no tag found):

N-17 (Chowilla Landslip), N-58 (Roaches Rest Cave), N-71 (Fairy Martin Doline), N-134, N-158, N-169 (Toolgana Rockhole), N-194 (Philistine Flattener), N-298 (Norina Cave), N-305 (Burnabbie Rockshelter), N-306, N-567 (Moondadong Rockhole), N-576 (Cocklebidy Rockhole), N-588 (Cherinaggi Rockhole), N-589 (Wileura Rockhole), N-590 (Tookana Rockhole), N-592 (Chidella Rockhole), N-600 (Balinoo Rockhole), N-739 (Boondara Rockhole), N-740, N-764 (Jirina Rockhole), N-792 (Carujie Rockhole), N-796, N-822, N-840 (Yayoudle Rockhole), N-841 (Nallah Nallah Rockhole), N-842, N-843 (Bariedibi Rockhole), N-846 (Pinjarabee Rockhole), N-847 (Youlganah Rockhole), N-892, N-896 (Graham Rockhole), N-898 (Yarrabee Rockhole), N-904 (Burnabbie Rockhole), N-975, N-976, N-977, N-978, N-981, N-1189, N-1190 (Thampanna Rockhole), N-1194 (Yalganimirra Rockhole), N-1196 (Yelangurra Rockhole), N-1226, N-1476, N-1619, N-1956 (Cologna Rockhole), N-1975 (Norina Rockhole), N-1976, N-3254 (Carlawerabija Rockhole).

(Total = 49)

Temporary 'NX' numbers visited and 'N' numbers allocated (where applicable):

NX-117, 124, 125, 127, 128, 131, 133, 134, 135, 136, 137, 138, 195, 243, 319, 354, 355, 541 (rabbit warren — not karst), 612 (nothing found after extensive search), 613, 614, 615, 616, 642 (nothing found after extensive search), NXK-947, NXK-948.

(Total = 26)

All our cave information was entered into the CEGSA Karst Index (KIDSA) in mid 2006 and so is accessible to all cavers.

Appendix 2: Examples of Map Errors

A list of some of the more egregious map errors we discovered on our two trips.

| | |
|---------------------|--------|
| Najada Rockhole | 0.75km |
| Bultanna Rockhole | 0.90km |
| Yudendah Rockhole | 0.95km |
| Wanteen Rockhole | 1.30km |
| Cocklebidy Rockhole | 1.35km |
| Kaleuna Rockhole | 1.45km |
| Cargolee Rockhole | 1.50km |
| Carujie Rockhole | 2.00km |
| Yuwanyadi Rockhole | 2.05km |
| Karulbie Rockhole | 2.40km |
| Karlabi Rockhole | 2.75km |
| Olworgan Rockhole | 3.20km |

These figures represent the disparity between the locations as determined directly from Turner's 1885 survey and the positions as shown on the current 1:100,000 topographic maps.

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State Records Office of Western Australia (1885), Record Series 211, consignment 541: General files — communications between Western Australian Surveyor General and G R Turner, 1885.

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Peter Ackroyd, 30 March 2010

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Corra Lynn Cave, 13 March 2010

Party: Graham Pilkington (L), Sue McCormack and Ian Charlesworth.

The start of the 2010 campaign on the Portal Dig. By the end of last year we had arrived at a fissure approximately 9m below the Wishing Well. However, we couldn't follow the pebbles that tumbled noisily out of sight. A second dig was needed to excavate the debris out of the fissure.

A ladder was dropped down into the fissure and Sue followed more slowly. I'd decided that we would start excavation from where the ladder hit the floor. For easy exit we did hang on to one end of the ladder and attached it to the new anchor bolts. With only the three of us (out of 8, 5 had had to cancel their participation) we had one at the bottom, one hauling, and one to dump the dirt into the southern Alberta tunnel. Sue first had to remove the pile of muck that Paul Harper had left there from my experimental dig at the junction. After that, the going got tougher, I mean stickier. On changeover, I was glad to see that the ladder was placed just right for self-extraction – thanks Ray! No more of the slow, contorted, top-haul system that was necessary when the ladder was attached to the rope up into Dreamland. By the end of the day we had removed 0.4m from the fissure floor as well as all of the debris excavated from the junction. However, next time a sledge hammer will be needed to break up the 3 or 4 rock slabs (broken bits of old flow-stone) that are impeding progress.

At no time during the dig was the carbon dioxide level noticeable. And with 3 of us pouring the stuff down there, it can only mean that even if no air movement was noticeable, it was moving. Wind in the Alberta on the way in was rare, hence one would expect the lack of movement "down below". The lack of CO₂ was a pity really because it was a very sloppy muddy environment and the walls were damp. With high CO₂, some of this would have been absorbed by the water on the walls forming carbonic acid in the process. The acid would then have dissolved some of the limestone and made the fissure wide enough to turn around in. (Wishful thinking!!!!!!; ed)

Graham Pilkington

Past Trips From General Meetings

PAST TRIPS FROM FEBRUARY GM

- 1 Ken Smith dived in the 300m long first sump of Junee Spring next to Growing Swallet in Tasmania. Maximum water depth is 60m but the cave chokes off at 40m depth.
- 2 Mark Sefton went with Steve Milner to Tasmania mainly to visit Kubla Khan Cave. Debbie Hunter was their main contact. There had been heavy rain just prior to the trip and all caves were very wet with heavy stream loads. The Kubla trip visit was into both ends instead of a through trip. Honeycomb Cave is about a km long and well worth a visit; it's one of several good caves that do not need a permit to enter. Westmoreland Cave had glow worms. The situation was unusual in that holes over a wide landscape could be seen to be venting "steam" and it would have been an ideal time to locate the major cave entrances.

PAST TRIPS FROM MARCH GM

- 3 Marie Choi visited Tasmania and attended a meeting of the STC where about 14 people attended.
- 4 In November 2009 Ken Smith took part in an 18 hour expedition in the Elk River streamway in the Murrindal Potholes Reserve at Buchan in Victoria. Ken Smith (CEGSA) and Mike Collins (SUSS) provided assistance to the push divers Jim Arundale and Agnes Milowka (both VSA) in pushing the upstream and downstream limits of the streamway. Peter Freeman (VSA) and Ted Mathews (Jenolan Caves) provided invaluable support in moving gear to and from the first sump.

Downstream sump 6 was extended to a distance of 60m without surfacing. Upstream sump 2 was passed to reveal 50m of low passage which sumped again. The explored streamway passage is now 1400m in length. The cave system is the deepest in Victoria at 105m deep. It also has potential to become the longest continuous stream passage in Victoria. The system is now referred to as the "Murrindal Potholes Eastern Master Cave" (MPEMC).
- 5 Ken Smith helped in a push dive at Jenolan.
- 6 Ian Charlesworth reported on the Corra Lynn Portal Dig held on the 13th March.

PAST TRIPS FROM APRIL GM

- 7 Eddie Rubessa and Mark Sefton gave a summary of their caving activities on Kangaroo Island over Easter. Two KI Rangers attended some of the cave visits.
 - a. Mt Taylor Cave - the bees are still-present!
 - b. Emu 4-hole Cave with the cave's owner Robert Smith.
 - c. Hamish Cave – a small drafting cave. A 4m diameter 2m high chamber was discovered.
 - d. Rocky River caves
 - e. A sea cave that contains unusual formations described in the book "Minerals of the World". Kevin Mott mapped this in 1987. Kevin has maps for about 80 KI caves.

TECHNICAL and OTHER ARTICLES**MEMBERSHIP****Welcome to new member**

A Daniel Rodriguez 1003 NFP

Alteration to February 2010 News

A Jonathon Adams 1001 Should be NFP (Not NFA)

Alterations to Annual Report listing

F Neville Skinner 0601 Change Work No. to 8186-9256

Af Peter Ashenden 0801 Change of address -
P O Box 640 STIRLING SA 5152
303 Pole Road IRONBANK SA 5153 (H) 8388-2676

Af Dave Fielder 0701

Af Andrea Gordon 0702 Change of address –
21 Kapoola Avenue CAMPBELLTOWN SA 5074 (H) 8336-8757

CF Stan Flavel 7901 (M) 02102210744 (E) tadarida7@gmail.com
2/3A Harrison Road, Mt Wellington, AUCKLAND CITY NZ
Postal Address P O Box 24 INGLEWOOD SA 5133

MEMBERSHIP FEES

CEGSA MEMBERSHIP FEES were due on January 1st. Continuity of membership has now expired. A Membership Application Form and a joining fee of \$12.00 now applies.

CEGSA MEMBERSHIP FEES FOR 2010 YEAR

| | |
|---------------------------------|----------|
| Full Membership | \$ 53.00 |
| Full Country Membership | 47.00 |
| Associate Membership | 45.00 |
| Long Term Associate | 53.00 |
| 3 Month Introductory | 5.00 |
| Joining Fee (N/A to 3mth Intro) | 12.00 |
| Discount for e-mail CEGSA News | 15.00 |
| Discount for Country Membership | 6.00 |

ASF LEVY FEE FOR 2010 YEAR

| | |
|----------------------|----------|
| Single | \$ 68.00 |
| Family | 121.50 |
| 3 Month Introductory | 20.00 |
| Student | 61.00 |
| Journal Subscription | 25.00 |

2010 YEAR FEES

| | CEGSA | +ASF | TOTAL |
|-------------------------|---------|----------|----------|
| Full Membership | \$53.00 | \$ 68.00 | \$121.00 |
| Full Country Membership | 47.00 | 68.00 | 115.00 |
| Associate Membership | 45.00 | 68.00 | 113.00 |
| 3 Month Introductory | 5.00 | 20.00 | 25.00 |

Variation for Family Membership

| | | | |
|---|---------|----------|----------|
| 1 st Full Member + 2 nd Full Member | | | |
| Less \$16.00 for only 1 CEGSA News | \$90.00 | \$121.50 | \$211.50 |
| 1 st Full Member + 2 nd Associate Member | | | |
| Less \$16.00 for only 1 CEGSA News | \$82.00 | \$121.50 | \$203.50 |
| 1 st Associate Member + 2 nd Assoc Member | | | |
| Less \$16.00 for only 1 CEGSA News | \$74.00 | \$121.50 | \$195.50 |

Discount for Country Membership applies for Family Memberships.

Please make sure your payment of fees includes CEGSA and ASF, if applicable.

Chris Gibbons. Treasurer/Membership Officer.

Approved CEGSA Trip Leaders

| Name | Caving Leader level |
|--------------------|------------------------------------|
| Marie Choi | Horizontal, Laddering and Vertical |
| Stan Flavel | Horizontal and Laddering |
| Grant Gartrell | Trip Co-ordinator only |
| Chris Gibbons | Trip Co-ordinator only |
| Damian Grindley | Horizontal, Laddering and Vertical |
| Paul Harper | Horizontal, Laddering and Vertical |
| Richard Harris | Horizontal |
| Lance Hoey | Horizontal and Laddering |
| Peter Horne | Horizontal and Laddering |
| Paul Hosie | Horizontal, Laddering and Vertical |
| Peter Kraehenbuehl | Horizontal, Laddering and Vertical |
| Ian Lewis | Horizontal and Laddering |
| George MacLucas | Horizontal, Laddering and Vertical |
| June MacLucas | Horizontal |
| Tim Payne | Horizontal, Laddering and Vertical |
| Graham Pilkington | Horizontal and Laddering |
| Phil Prust | Horizontal and Laddering |
| Eddie Rubessa | Horizontal and Laddering |
| Mark Sefton | Horizontal and Laddering |
| Michael Woodward | Horizontal, Laddering and Vertical |

All the above named are also CEGSA Trip Co-ordinators.

Members may query the classification of any Trip Leader at any time with the committee.

It is a requirement that each trip be organised by an approved Trip Coordinator to be classed as an official CEGSA trip. It is also a requirement that dependent party trips be led by an approved Trip Leader at the appropriate skill level for the cave being entered.

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Stories of Englebrecht's Cave

I've been cave diving for 40 years now, after I grew up in Mt Gambier as a kid and went caving all over the district from the age of 12 in 1966 under expert guidance – first from Ken Heyne and then with Fred Aslin who got me extremely interested in mapping caves and learning their history. And that's what I've been doing ever since, involved in gathering stories and history about the caves and understanding their geology. I'm currently finishing a PhD thesis on the geology of the caves at Naracoorte and their relationship to the Kanawinka Fault, so it's a lifelong interest.

Plenty of cavers and divers have been involved over those decades in research projects contributing to our knowledge of caves and sinkholes across the Mount Gambier region. But not many of us know the stories behind each of the caves, so I'm writing a series of stories and explanations of various sites to make sure the background of these caves continues to be told, and also to ensure that newer generations of cavers and divers who've never heard of half of us from earlier years can share in the enjoyment of that research. I'll write about one cave at a time as each has its story, but first you need to know a bit about the region's history to put these cave stories in perspective.

Settlement around Sinkholes

The Mt Gambier and Mt Schank volcanoes were sighted from offshore by Lieutenant James Grant in 1800 as he sailed past mapping this coast in the ship Lady Nelson. A full-scale replica of this ship which you can walk through is at the Mt Gambier Tourist Information Centre. Lieutenant Grant is the same man who on the same expedition discovered Portland Bay and Cape Otway. He was the first ever to enter Port Phillip Bay. His Bosun was William Pope, the man who discovered the famous Pope's Eye Sandbank just in from The Rip by leaning over the bow with a sounding line and yelling a warning as the Lady Nelson approached the steeply rising sandbank. The ship was saved by Pope's

sharp eyesight - hence its name "Pope's Eye" - the name given to it 60 years before a rockwall was built around it.

The Lady Nelson did not land after sighting Mt Gambier. It was another 36 years before the Henty brothers sighted the mountain from the Kanawinka Fault ridgeline just east of Dartmoor while looking for pasture land to the west. It is thought they had knowledge of or a copy of Grant's coastline map with the two named Mountains. Their first visit in 1836 discovered the amazing Blue Lake and they built a stockyard in the Browne's Lake basin (which interestingly was dry at the time) next to the Valley Lake. They explored around the mountain and discovered the Cave Gardens, quite probably Umpherston's Sinkhole and maybe Englebrecht's Cave. Within a couple of years, Evelyn Sturt, the brother of Charles Sturt the explorer and a rich landholder in Adelaide, had the Hentys booted out when he worked out where the Victorian border was and took over a pastoral lease for the whole Mt Gambier area including all these caves and their water. Later he got even richer when the town was surveyed and subdivided. His mansion is near Tenison College on the western slopes of the Mountain.

Mt Gambier is known as the "City around a Cave". There are a couple of early sketches showing steps down into the Cave Gardens for people to get water, as there was a clear lake there at one stage (though I actually think they are actually sketches of Englebrecht's entrance). Later, alongside the entrances of all three caves, locals dug 1-metre diameter well shafts directly over the then-existing lakes to draw water directly by windlass. You can see the wells alongside the entrances at Umpherston's Sinkhole and Englebrecht's Cave and under perspex on the north-west edge of the Cave Gardens - in each cave you can also see the well shafts from underneath. Why is this significant? Because there are no signs of lakes anywhere directly beneath these shafts today and they have not been above water in the time since scuba diving has been invented. They were dug at a time of exceedingly high water level in the 1890's, risen many decades after the Henty brothers arrived. The story of fluctuation water levels in the region is far more than just the recent decline and will have to wait for another article - but it's fascinating.

Stories that Englebrecht's Cave can tell

This article is about Englebrecht's Cave which has a chequered history since settlement and has gone through various stages of diving discoveries. It has a geological significance that divers are unaware about; nor indeed are the general public. I'll talk about the history first as the background sets the scene for much of much of what has happened.

There are a number of sources for historical information about Englebrecht's Cave. Peter Horne authored the "Englebrecht's Cave Mapping Project 1986" for the CDAA's Research Report Number 4, one of dozens of quite outstanding detailed cave and sinkhole reports he has contributed to the sport and science of cave diving over several decades. In 1980 Peter Stace and I featured a two-page spread on Englebrecht's Cave history in our book "Cave Diving in Australia" which only showed a map of the Eastern Side as the western underwater tunnel was not even known then! Another excellent source is the information available in the beautiful display at the Englebrecht's Kiosk run by Rhianon and her team - we wish them all the very best of success with taking on the Concession.

I'll quote a bit from our Cave Diving in Australia book (p142) which is in part taken from an old newspaper article "In 1864 a group of 4 men and one ten-year-old boy named Charles Grosser, led by Dr Wehl of Mt Gambier [whom Wehl St is named after] entered a cave entrance on North Terrace [the old name for Jubilee Highway West]. With them into the cave they carried a canoe built of hardwood and sealed with pitch to undertake a hazardous exploration of the subterranean waterways. In an article written in 1933, the 10-year-old boy, now Mr C. Grosser aged 79 years old recounted ...

"I can clearly remember how the current caught the canoe and carried us along as soon as we got into the stream. We must have gone 200 yards [metres], travelling directly towards the Blue Lake. The stream took several turns, and the current was so strong we had great difficulty in getting back."

This is particularly interesting. As all divers know, there is no flowing water in Mt Gambier caves and hasn't been since diving started in the 1960's. Is it possible however that 100 years before, when the water table was the highest it has ever been since European settlement had begun with the Hentys,

that water flowed in some caves? For the last 40 years those of us researching caves and groundwater have dismissed this account, wondering if a 10-year-old in the dark with candles in a canoe had imagined much of it, particularly in later years.

But consider - if anyone had said to cave divers in 1970 that the water table would drop nearly 5 metres in only 40 years, we would have laughed at them. This suggests that water variability across the Mt Gambier region may be considerably greater than we think we know, and nowadays many historians on all manner of subjects are acknowledging the relevance of oral histories (people's descriptions of the Titanic sinking, the Stolen Generations etc). So did the young Charles Grosser see something in the earlier cave hydrology that we can't imagine nowadays? Quite possibly. The scalloping and solution features all over the walls and roof of the Eastern chamber are far more ancient than a century ago but do indicate phases of prehistoric water flow. And the old Charles was right - the Eastern Chamber heads directly towards the Cave Gardens (about 2 kms away) which has a (grotty) pool heading back directly towards Englebrecht's Cave.

Pollution and Discoveries

I first visited Englebrecht's Cave as a teenager in 1967. The entrance was full of wire and rusting rubbish - we had to clamber through all the wire and crawl down the eastern passage through broken glass squeezing against the roof all the way to the lake. There were no lights, paths or platforms in existence. The western side chamber was so buried in wire rolls etc that no-one even knew it was there at that time! No-one remembers now, but at that time straight over the road on the north side of the highway was the Scott's Transport truck yard where there is now a supermarket, petrol station and about 3 workshops. That meant that when the stock trucks were hosed out all the crap went straight across the road and down the slope into Englebrecht's entrance along with oil, diesel and other runoff. There is also a stormwater pipe still sticking out of the northern entrance wall. There's no real blame here - no-one in the community was aware of the interconnectedness of the groundwater system then and it wasn't until the early 70's that pollution detection programmes began to connect the dots. Everyone knows it now, but nobody knew it then! Cave diver research programmes have contributed solidly to this understanding. Scotty eventually moved west of the city for more yard space and to help eliminate the pollution problem.

After the Lions Club cleaned out the cave, CDAA divers got into the water and began finding things. To quote Peter Horne's report (p3) "Around the same time that this cleanup was commencing, cave divers Peter Stace, Phil Prust and Ron and Robyn Allum decided to assess the site again - the first visit by divers in 15 years - whereupon they promptly discovered the Eastern Side's large air chamber. Later in May 1979, Ron squeezed through what was a very tight, silty and unstable tunnel in the small pool on the Western Side, where he discovered that the passage opened up ... through a restriction and explored the 100-metre long submerged passage which headed off to the north-west." For some time after that, everyone thought that the passage simply came to an end in a rock blockoff.

A serious side to exploration dives

Then in 1979 I did a dive with Terry Reardon (now chief Bat Man for the South Australian Museum). Because I'd been a dry caver as a teenager mapping every last little passageway, I went right to the rockface at the end of the tunnel, because YOU NEVER KNOW! Imagine my amazement when my air bubbles disappeared straight up above me and into a new lake! Terry and I explored the inner chamber and a short way into the other underwater extensions there but while walking back to the exit lake to dive out, I trod on one of those thin flat rock slabs that are pretty crumbly in there. It broke under my weight and I smashed my head on a boulder, cut my head and nearly passed out. Terry came over to help me but I was really groggy so we sat there for a while. Then we both realised that nobody on the entire planet knew where we were ... there was no-one up top, and no cave diver knew that the end of the first tunnel went straight up into a large unknown chamber. We considered leaving me there while Terry went out but my head cleared a bit so we both dived out very slowly - I was not too flash. But we got out OK because of our good buddy training. These were the days of single tank diving too - cave divers, think of that when you go through to the inner chamber next time! This incident got the CDAA thinking seriously about surface notification and backup divers etc which became common practice. Bloody serious when I think back on it now.

What you are actually diving through - some special Geology

When you walk down to the Eastern Chamber platform, look up at the walls and roof. They are actually far more interesting than the mud and the water! You see a rift going upwards, then scalloping and curved solution blades and rippling on the walls plus a number of horizontal "notch levels" or wall channels extending right along the southern wall. Then of course there is the low flat tunnel that you dive through to the next chamber. Standing on the platform, you are seeing at least 3 different separate geological phases that have occurred in that room.

The **first** one is the rift. Geologists and Geomorphologists call it a "Joint" - a line of weakness in the limestone where it's been split and later opened up by water. There are thousands of these splits all over the South East, forming many slender caves like Morgan's Cave, Gums Road Cave and Vine's Fissure over towards Tantanoola. Underwater in Englebrecht's East, you come across more of these joints if you turn right at the tie-off rock (point D on the map) instead of as you dive through to the inner East chamber. When water seeps down from above it widens these joints and they bell out a bit like the Englebrecht's East platform chamber does. The **second** geological phase occurred over long time periods when lake levels rose and fell in the rift. When I saw it in 1967, the lake was about 6 metres higher than now, and would have completely drowned the ramp and most of the lower steps. But this has also occurred many times before over thousands of years and has left a geo-history of the scallops and wall notches showing where water stayed at one level for some time. Water attacks the limestone most strongly at lake level where it is most acidic due to air contact, so it dissolves the scallops and grooves in the side-walls. This process also accounts for the **third** geological phase when at some time the water dropped to the level of the low flat connector passage that the divers dive through (point D). That broad flattener is there because water stayed at that particular level for a far longer time than any other depth, long enough for it to dissolve away the entire flat passage. This then naturally intersected the next lot of vertical joints which are the inner chamber system.

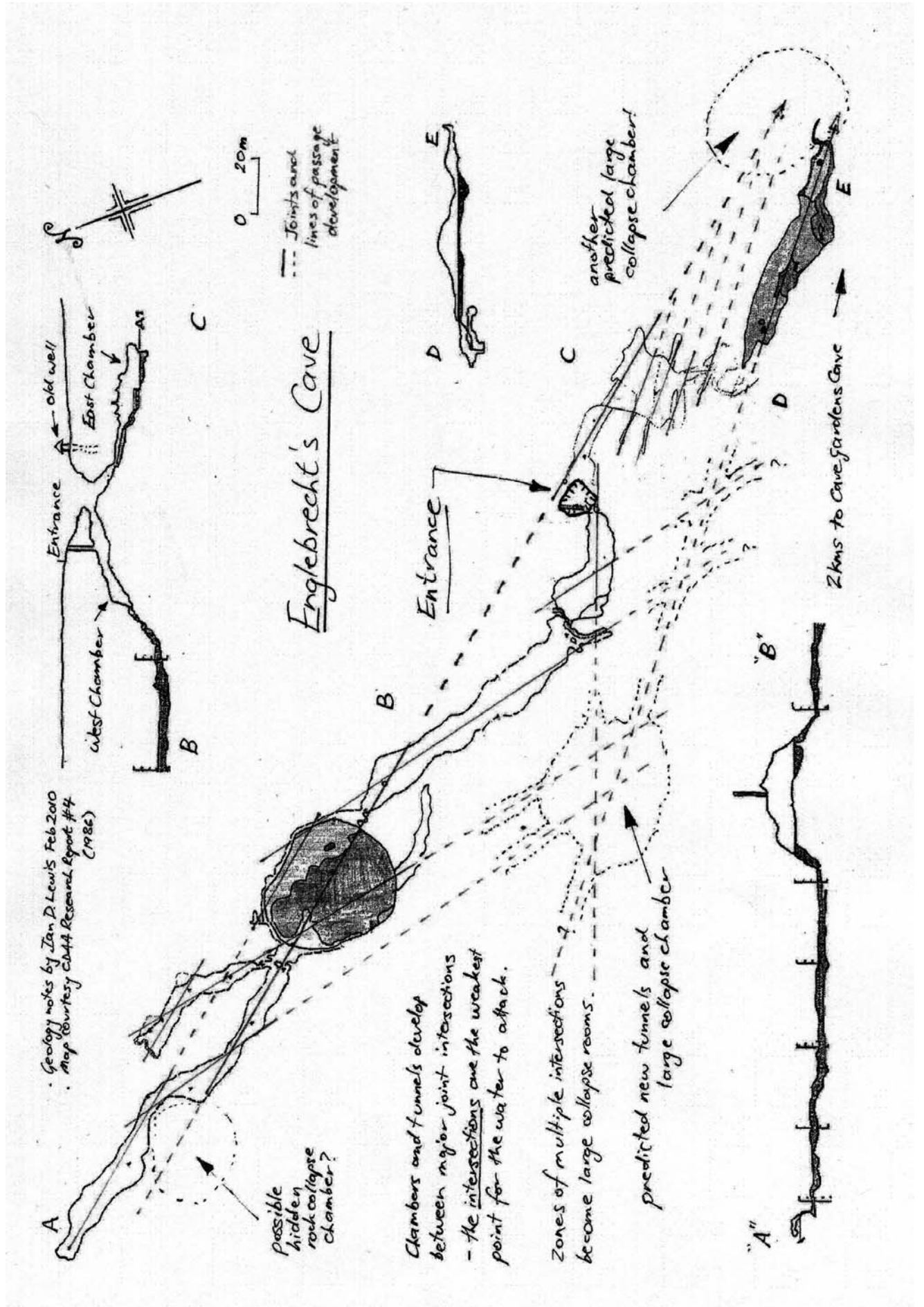
To see these three phases by standing on the platform is wonderful geological science and a picture of at least 20,000 years of geo-history - possibly far older even than that. Why can't you see these features in the Western Chamber? Because all of its walls have been collapsing rock-by-rock over that time, burying the wall-scalloping evidence. The only thing that still remains in the Western Chamber there is phase three - the long flat western tunnel (see B). But it has no flat side extensions leading to parallel joint passages on either side...yet! It may only take one diver to move the right rock and off we go. Remember how easy it was to find the Western Chamber, by just poking my nose an extra metre!?

People also ask the guides if Englebrecht's Cave is volcanic? That's because most people don't really know the difference between various types of rocks - in this case limestone and basalt. It's not volcanic, but I have to say it is possible that the joints in the Englebrecht system may have been multiplied or widened by the huge forces exerted on the whole limestone area where the city is now. These forces occurred when the lava and steam forced its way through the limestone close by and the volcano blew up multiple times, forming the four big craters and the incredible Blue Lake when the groundwater flooded the giant hole left in the limestone. A reasonable scientific estimate for this event was around 23,000 years ago. From our geological work in other caves around the district, I expect that Englebrecht's Cave is more probably 100-200,000 years old and these phases within it have occurred throughout that time.

So Englebrecht's has plenty of stories to tell. I could fill this whole CEGSA Newsletter with more on just this cave and the issues it raises, but Athol won't let me so it might have to wait for a few years while I tell some of the stories of other sites you all dive in. I reckon Englebrecht's is a fantastically interesting place to be in and it's one of my favourite caves, despite all those bloody steps!

Ian D Lewis,

CEGSA #6701 and CDAA #258



Geology notes by Ian D. Lewis Feb 2010
 Map courtesy CMTA Research Report #4 (MSE)

Englebrect's Cave

Chambers and tunnels develop between major joint intersections - the intersections are the weakest point for the water to attack.

Zones of multiple intersections become large collapse rooms.

predicted new tunnels and large collapse chamber

"A"

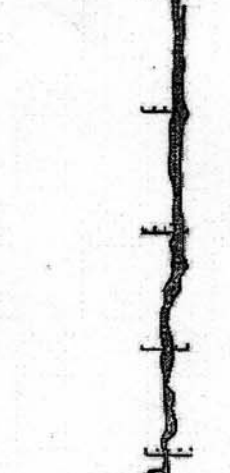
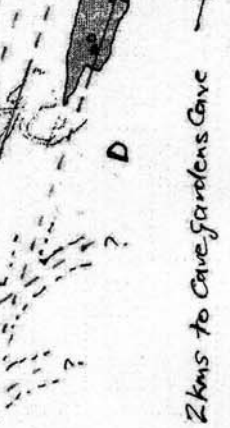
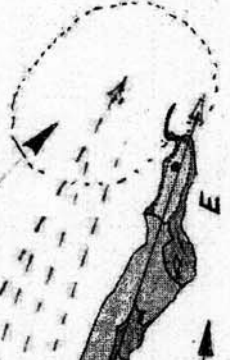
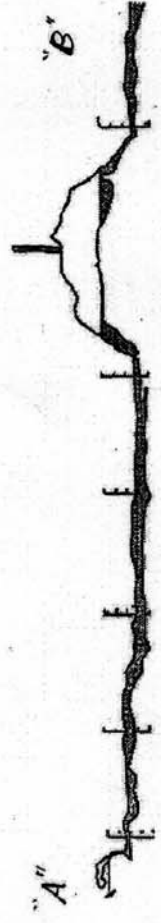
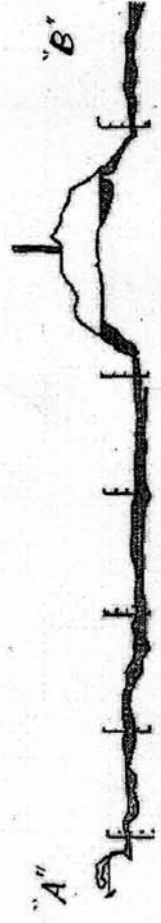
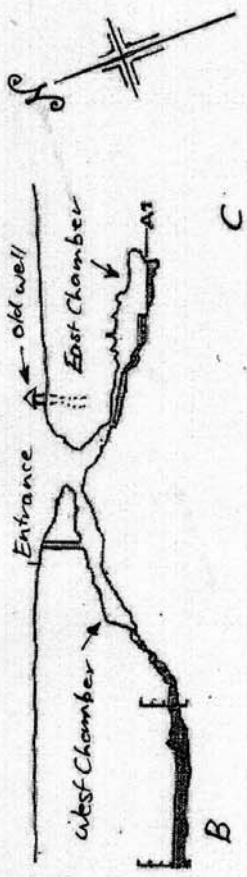
"B"

2 kms to Cave Gardens Cave

another predicted large collapse chamber

0 20m

--- Joints and lines of passage development



Notes From General Meetings

FEBRUARY GM

Nil

MARCH GM

- 1 ASF has a sent voting slip for 2 Guidelines. CEGSA eNEWS to distribute a copy of both proposed guidelines to members for comment.
- 2 Moved by Graham Pilkington that "CEGSA spend up to \$1500 to complete the digitizing of its maps, clippings, and Minutes". Seconded by Chris Gibbons. A short discussion on the merits of the proposal and the size of the task was led by Graham. After establishing that CEGSA has the finances, the motion was approved unanimously.
- 3 Moved by Graham Pilkington that "CEGSA spend up to \$1000 to enter biological and other data into OzKarst". Seconded by Marie Choi. It was stipulated that this was for Fred Aslin to record his 50-years plus of fauna and flora collections that could easily be lost otherwise. Marie noted that CEGSA should encourage and support speleology as well as caving records. Motion put and approved unanimously.

APRIL GM

- 1 The Committee voted in favour of the proposed new Scientific Minimum Impact and amended Minimum Impact ASF guidelines.

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CEGSA NEWS for SALE

Digital Copies of the CEGSA NEWS (issues 1 to 215, in text-readable form) and Annual Reports (1956 to 2008, most in text-readable form) are now available on a CD for \$25 plus postage and handling (\$3 in Australia).

CEGSA members get a discount and can purchase their copy for \$10 plus postage.

Monies raised will be used to create a digital index to the articles and to complete the text-readable digital copies of our Occasional Papers.

Orders to: *Graham Pilkington*

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REMINDER

Members are reminded that CEGSA will reimburse all reasonable expenses incurred by members in catering to the operation of the Group, execution of Office bearer activities; and running Group functions. If the expense will be beyond the pre-approved budget, then it's suggested that the member get prior approval from the Committee or a General Meeting before expending the money.

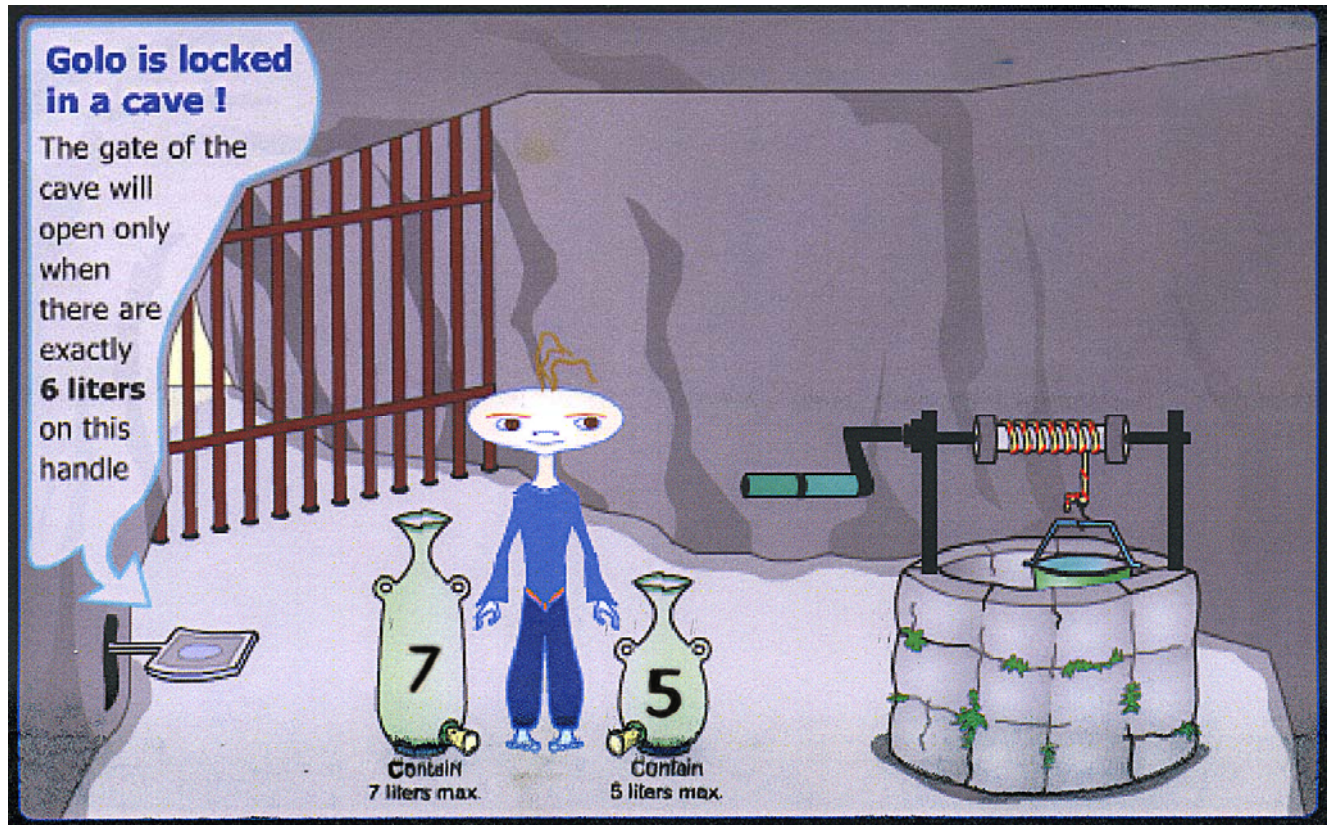
The Committee

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26th ASF CONFERENCE PROCEEDINGS

The compilation of the proceedings of the 26th ASF Conference has been completed and are with the printer to complete the publication. The DVD version has been completed and the DVD's have been produced. As soon as the books come back from the printers they will be distributed to those who have ordered them. There will be a few extras for sale. Printed copies are \$20.00 + \$10.00 P&P and the DVD version is \$10.00 + \$5.00 P&P. Get your orders in early to avoid missing out.

Athol Jackson.



Fill and empty containers until there are exactly 6 litres in one container.

There are at least 2 different sequences to achieve the result.

%%%%%%%%%

This puzzle is exclusively for hardcore optical illusion fans!! (see below picture)

A Cave Man was out hunting for food for his family when he came across a huge Bengal Tiger standing in a bamboo forest. The Cave Man thought 'he must have a mate somewhere nearby'. Your mission is to look for the hidden tiger in the image below.



Answers will be published in the next issue.

CALENDAR OF EVENTS

| Date | Type of Event | Description | Contact |
|--------------------|----------------------|--|-------------------|
| 26/05/10 | General Meeting | Royal Society Room, SA Museum, Adel. Ripping Yarns from CEGSA's History | Ian Lewis |
| 29/05/10 | Working Bee | Library and records | Graham Pilkington |
| 30/05/10 | Caving | Corra Lynn with Mercedes College | Graham Pilkington |
| | | | |
| 06/06/10 | Caving | Corra Lynn Photography workshop | Ian Lewis |
| 09/06/10 | Committee Meeting | TBA | Mark Sefton |
| | | | |
| 23/06/10 | General Meeting | Royal Society Room, SA Museum, Adel. Photography follow up to Corra Lynn trip | Ian Lewis |
| 26/06/10 | Working Bee | Library and Records | Graham Pilkington |
| | | | |
| | | | |
| 14/07/10 | Committee Meeting | TBA | Mark Sefton |
| | | | |
| | | | |
| 28/07/10 | General Meeting | Royal Society Room, SA Museum, Adel. | |
| 31/07/10 | Working Bee | Library and Records | Graham Pilkington |
| | | | |
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| | | | |
| 11/08/10 | Committee Meeting | TBA | Mark Sefton |
| 11/08/10 | CEGSA NEWS | Articles due | Athol Jackson |
| | | | |
| | | | |
| 25/08/10 | General Meeting | Royal Society Room, SA Museum, Adel. | Graham Pilkington |
| 28/08/10 | Working Bee | Library and Records | Graham Pilkington |
| | | | |
| 25/09- 10/10/10 | Caving | Nullarbor family friendly beginners / photo trip to the larger "tourist type" caves | Mark Sefton |
| | | | |
| | Training | Ad Hoc training | Tim Payne |
| | Caving | Ongoing Vic Fossil survey | Gary Woodcock |
| | Caving | Continuing Fleurieu Peninsula Exploration | Grant Gartrell |

It is desirable that caving trips involving club members should, where possible, be registered as CEGSA Trips. To do this, the nature and timing of the trip must be nominated to the Trip Liaison Officer and/or minuted at a General Meeting of Members. The member registering such a trip must be an accredited CEGSA Trip Coordinator and must agree to act in this capacity for the trip. There must also be an accredited trip leader with the appropriate skill endorsement to take a dependent party caving. Also, please ensure that a report of the trip is submitted in a timely manner.