

CEGSA NEWS



Newsletter of the Cave Exploration Group of South Australia Inc.

Volume 41 Number 3

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AUGUST 1996



THE STORE WITH CAVERS ON STAFF

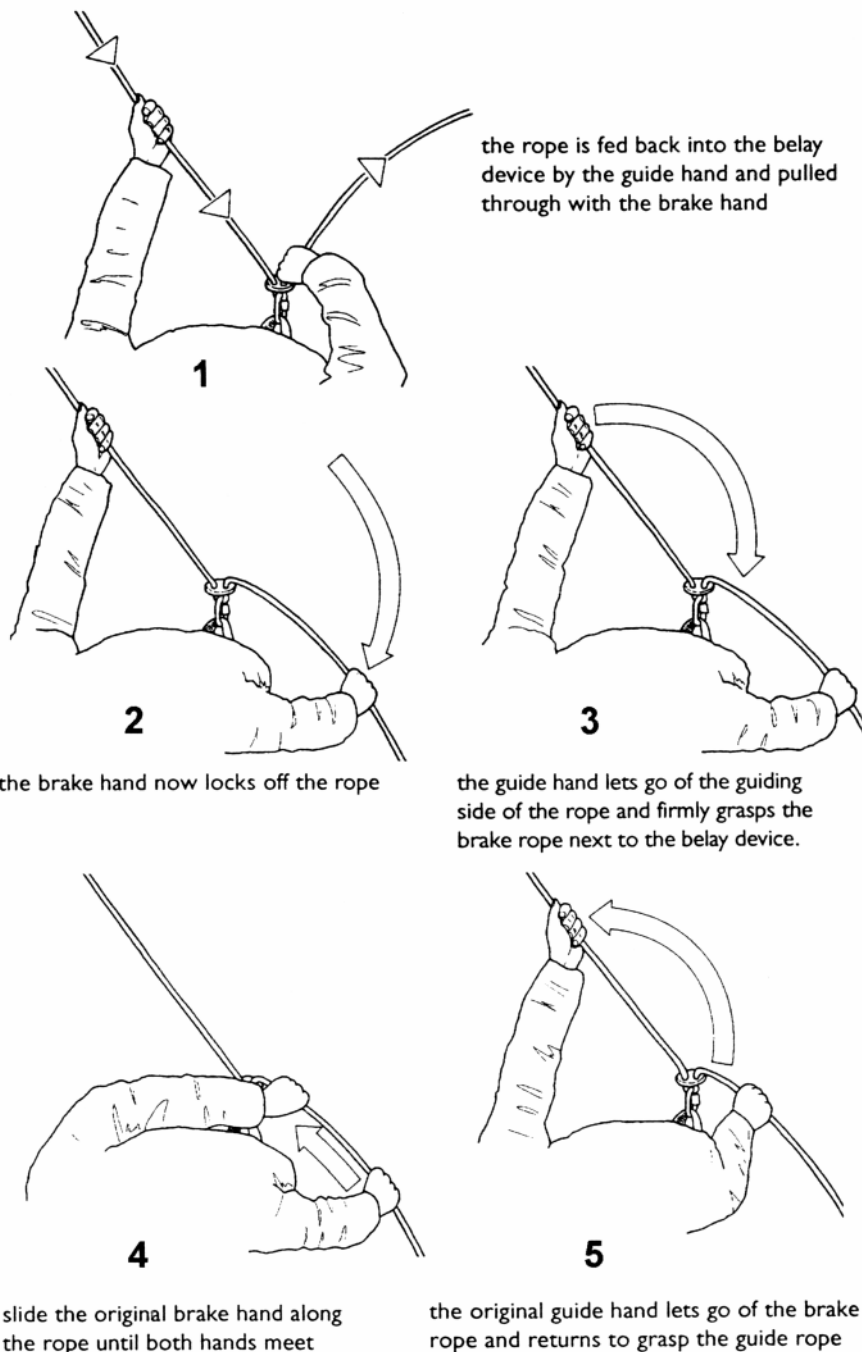
Two books which should be of interest to cavers are:-

THE DARKNESS BECKONS - The history and development of cave diving, written by Martyn Farr. Retail \$42.00. This is the second edition of an acclaimed book originally published in 1980. It describes the dangerous yet fascinating activities of cave divers, groups of cavers and open water divers who have adapted diving technology in order to explore flooded cave systems. This new edition of **THE DARKNESS BECKONS** incorporates much additional material, both historical anecdote and accounts of the most interesting recent dives. There are also many additional photos and diagrams. It is a chronicle of outstanding sporting endeavour, as yet little known outside an elite specialist world, but sure to inspire anyone with a taste for adventure.

ADVENTURE OF CAVING - A practical guide for advanced and beginning Cavers, written by David R. McClurg. Retail \$28.95. This book is a practical guide to help you find your own underground adventures without damaging the cave or yourself. Based on his nearly thirty years of active caving in the United States, Mexico, Yugoslavia and other countries, David McClurg covers everything the first time or advanced caver should know about techniques and equipment. **ADVENTURE OF CAVING** emphasises the need for good safety and conservation attitudes to reduce the risk of personal injury and to protect fragile underground beauty that took countless thousands of years to create.

*"He who knows not mystery
and can no longer wonder,
no longer feel amazement,
is as good as dead."*
ALBERT EINSTEIN

five-step belay method



CEGSA DISCOUNT

Remember to ask for your 10% discount at both the
SCOUT OUTDOOR CENTRE and the **ANNAPURNA OUTDOOR CENTRE.**

CAVE EXPLORATION GROUP SOUTH AUSTRALIA Inc.

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

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

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Cover Picture: "Nullarbor Bath". (See P51 for details) Photo by June Maclucas.

CONTENTS

Volume 41 Number 3
Issue 163
AUGUST 1996

		page
CONTENTS		44
EDITORIAL	Athol Jackson	45
LETTERS		45
TRIP REPORTS		
News from the Deep South	Kevin Mott	46
Lower South East	Bart Jansen	46
Nullarbor	June MacLucas	47
TECHNICAL AND OTHER ARTICLES		
Two Years on the Road	June MacLucas	54
Membership	Graham Pilkington	56
Library and Records Update	George MacLucas	56
"KARST" Review of Computer Program	Max Meth	57
Obituary	Max Meth	58
NORLD - ORCA etc. What does it all mean?	Alan Jevons	58
Life Membership (Notice of motion)	Editor	61
21st Biennial ASF Conference	Editor	61
Index to CEGSA Newsletter Volume 40	Kevin Mott	62

The deadline for copy or background material for Volume 41 Number 4 (Issue 164) must reach the Editor by Wednesday 23rd October 1996. Material not meeting this deadline may be retained for possible use in a following issue.

The views expressed in this Newsletter are those of individual authors and not necessarily those of the Cave Exploration Group (South Australia) Inc. nor its Committee.

EDITORIAL

This will be just a brief rundown on what has been happening at the General Meetings as I am running out of space.

The May and July meetings were assigned as business only meetings but Steve Milner brought 2 UK cavers, who were visiting him, along to the meeting in July and after the business was concluded they presented a very impressive slide show of some of their expeditions into Thailand.

David Trehearne gave a very informative demonstration of some of the more useful knots to be used in caving (both how to and how not to tie them) at the June meeting. He also had some good samples of equipment which had been damaged through both accident and lack of proper use or maintenance.

Please keep the articles coming in.

Athol

LETTERS

Editor CEGSA Newsletter

Dear Sir

It was gratifying to read in CEGSA Newsletter Vol 40 (4) that a couple of trips were run to Burleeyung Cave by members of CEGSA.

What is disconcerting is that members don't appear to be talking to each other. One trip was the result of looking through CEGSA Records and was run to confirm that the original information supplied was indeed correct. The other trip was to survey the cave. This is interesting. The report asks for information about the cave as they found the existing survey stations - very astute! The report does not say where the report for the cave come from; for if they used CEGSA Records they should have been aware of the existence of map 5A16 - CEG3007.

Kevin Mott

SOUTH AUSTRALIAN SQUADRON AIR TRAINING CORPS

The President CEGSA

Dear Sir/Madam,

On behalf of No2 Flight Woodside, I would like to thank CEGSA for organising a caving weekend at Naracoorte last weekend, the 17th & 18th August.

Please pass on our sincere appreciation to Simon Kendrick, Marie Choi, Dave Trehearne, Ivan Riley, David and Genelle. The professionalism, understanding and leadership displayed were second to none. Their vast experience working with and motivating young people to give it a try shone through and meant that 22 cadets had a positive opportunity to learn about caving, the cave environment, and personal development skills.

Comments from the Cadets included:

- "It was wicked!!" - I think that means good and was expressed by all the cadets!
- "I really realised in Cathedral what teamwork was all about, we had to work together to get through it".
- "It was amazing what Dave (T) could squeeze through!"
- "I didn't believe I could do it, but Simon talked me through it, and I was really proud I did it."
- And from our Flight Commander: "I didn't know I had muscles there!"

The buses buzzed all the way home with tales about the weekend, our bus even asked for the Metallica tape to be turned off (much to Gary's and my relief!) so they could compare stories. These adventures seemed to get better the closer to home we got! I'm sure there will be some great stories for school today.

Once again, please pass on our sincere appreciation for the time and effort spent organising and running the weekend. It was fabulous. Keep up the great work CEGSA!

Yours sincerely, **Donna Hourn** (Training Officer)

PS. Please let the guys know we will get them a tape of **AIR FORCE** marches - although their music did impress the Army Cadets!

TRIP REPORTS

NEWS FROM THE DEEP SOUTH

Caving in the South East has been continuing both above and below ground this year. New caves continue to be found with the numbers now up to L366. Some interest has been shown by Adelaide members in the South Australian section of Victoria with a new cave found at Cave Ridge. This has about 100m of passage and it is planned to track mark it to keep people away from the decoration. A trip to the Drik Drik area located and surveyed several caves and a series of collapse dolines.

Clean up work continued at Rendelsham with members of FUSS. The cave is now looking like a cave and not a rubbish tip. L95 has had a clean up with hard rubbish going to a nearby PISA landfill and burnables placed on the windrows for subsequent burning. The survey of Monbulla Cave has now defined the outer limits of the cave. Work remaining to do includes some leveling and detail surveys of some of the earlier surveyed areas.

Reports of caves keep coming in, especially from David Glowacki. Recently while following up one of his reports a new cave and a collapse feature were found. It turns out that neither were the feature that David reported. It seems then the best way to find a cave is put a dot on the map then go there. Where else in the country can you do that. The new cave is in the Furner area and is one of a number of reports coming from that area. There are plenty of caves to be found if someone is prepared to look. L322 has now opened up sufficiently to allow even wombat Frank into it. Perhaps now Ponds Horne will fit. (*a pond is a larger puddle.*) Is nothing sacred? Why visit the same old caves to death when new ones beckon? The South East is as bountiful as the Nullarbor if you exclude the rockholes; and closer.

Research in the libraries of the South East has provided a wealth of history in the form of newspaper articles relating to caves. We now have 650 articles listed. If any one has any articles could they please pass on details (and copy) to me. Details required are title, publication, date, page, cave ref, subject. Microfilming of maps is continuing. It is surprising the lack of maps emanating from Adelaide. Either people are not doing any caving or the they are shutting up and sitting

on the maps. If you produce a map, please put a scale bar on it. If you just put a scale factor and then reduce the map it is meaningless.

A rescue of people overdue in Collins Cave occurred recently. A neighbor raised the alarm when a car was seen to be parked on the adjacent road for an extended period of time. Three local youths, illegally on the property, emerged from the cave as emergency personnel arrived. The lock on the gate had been previously damaged. This has now been subsequently repaired. **Please note** the lock is now one belonging to the owner so the CEGSA key is no longer applicable.

A recent party in Morgans Cave (non ASF affiliated group) failed to return the key. Discussions have been held with Primary Industries suggesting that only members of affiliated bodies or groups led by affiliated bodies should have access to the keys and a tighter recording procedure be adopted. It was also recommended that the SA Speleo Council be contacted to formalise procedures. Members are reminded that although access to forests is permitted certain activities, including caving, require a permit under the Forestry Regulations. A permit ensures you do not wander into an unsafe area and informs forestry personnel of your whereabouts in the event of an emergency.

A draft management plan for Flinders Chase NP, Kelly Hill Caves CP, Ravine des Casoars WPA and Cape Bouger WPA has been released for comment. An interesting claim is that they don't have cave information. The Parks service has already been supplied with a map book containing all the cave maps, a trip book with all the trip reports and a plan showing all the locations of the caves around Kelly Hill. This information was obtained over a five year period while trying to sort out the locations of K7-10. There is actually more to Kangaroo Island than Kelly Hill Cave. Perhaps a requirement of getting into Kelly Hill should be a survey of two other lesser caves. It would cut out glory seekers and see the original work continued. There seems to be a history of park staff being changed too frequently. As a result information is not always passed on. Perhaps Kelly Hill should be regarded with the importance it deserves - not as a nuisance annexe to Flinders Chase.

Kevin Mott

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LOWER SOUTH EAST

Trip date(s): 8th to 10th March 1996.
Area visited: Lower South East of SA.
Caves visited: Monbulla Quarry, Monbulla, Gran Gran, Tindale's.
Personnel: B. Jansen, D. Lowe, N. Trenorden, D. Wright, M. Wright, C. Edwards, and about fifteen others from Westcare.

Friday 8th March

Departed Adelaide about 1700 to have dinner at Tailem Bend. Uneventful drive to Monbulla quarry where we set up camp in the scrub. Still fire danger so the gas BBQ came in handy. A party of about 5 people went into Monbulla quarry cave while others (namely myself) waited up for them and fixed 8 Petzl headlights. They returned at 0200. "Wickerrrrrd cave, man!"

Saturday 9th March

After breakfast I took some of the kids walking and we found seven turtles (Long neck tortoises. Ed) aestivating in the scrape between the track and the road (if that is what turtles do in summer). The owner of the property arrived and he and four others entered the quarry cave to clean some of the graffiti. When completed, they looked for the entrance to another cave to the north east but could not find it (conjecture is that it is covered by a pile of rubble). Meanwhile the others went to Gran Gran to christen one of the Westcare leaders. We met Chris Hales and his party in Gran Gran. I think they were a bit surprised to see video cameras and masses of people (about 20) disappear into the east water passage, to emerge dripping wet fifteen minutes later.

Afterwards we went to Tindale's to celebrate, dodging the Millicent Hospital parade via some tortuous detours. At least one driver dodged not only the parade, but Millicent itself, finishing up half way towards Rendelsham before thinking that there must be a more direct route to Tindale's.

After Tindale's, the party split up, some returning to Adelaide while others scrambled through the forests looking for Tantanoola sinkhole. Did not find it, but we did find Chris' party's vehicles parked in the forest and neatly (and nearly) blocking the track.
Back to Monbulla.

Sunday 10th March

Some of the party went to Monbulla itself, some went to quarry cave while several of us did some digging in Crowbar cave. After lunch, home.

B. Jansen

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NULLARBOR

TRIP REPORT 10TH APRIL TO 4TH MAY 1996.

Includes survey of Thampanna 6N206, Goat 6N745 & Knife Blowhole 6N94.

Participants: Ken Boland (VSA), George and June MacLucas, Frank Hankinson, Ray Gibbons and Max Meth (CEGSA).

Main features visited:

Thampanna 6N206, Goat 6N745, Hurricane Hole 6N483, Old Homestead 6N83, Kestrel Nest B/ Hole 6N383, R/hole 6N1224, Liars Dare Cave 6N1347. Fern Cave 6N747, R/hole 6N1380, Doline 6N731, B/hole 6N1381, Tusk Cave 6N1382, Doline cave 6N1383, Cave 6N1384, B/Hole 6N1385, Kelly Cave 6N165, Webb Cave 6N132, Snake Pit 6N133, Prostate Pit 6N1369. Stegamite Cave 6N149 Doline 6N1386, Doline 6N482, R/hole 6N1392, Doline 6N1393, Cave 6N1394, B/hole 6N1395, R/hole 6N1396, Doline 6N1397, Doline 6N1398, Mullamullang 6N37, Cave 6N68, Murra-El-Elevyn 6N47, Cocklebidy Cave 6N48, Knife Blowhole 6N94, and Weebubbie Cave 6N2.

A few days before our trip started, Miles Pearce and Darryl Carr, both VSA, arrived from Melbourne and stayed the night on their way to the Nullarbor. They planned to join the group surveying Old Homestead 6N83 before joining us for a few days at Thampanna 6N206.

Tuesday April 9th, Ken Boland arrived from Melbourne and Frank from Reynella, both staying the night in order to have an early start for the next day. Next morning we all set off as planned, meeting at Kimba to call on a local farmer in the area, Peter Kobelt. Peter had met Ray Gibbons while caving at Naracoorte a few months earlier and suggested that when we were in the area could we investigate some holes on his property. These holes turned out to be Wombat diggings and soil erosion. Peter was a great host, we all stayed the night in the "old farm house". This turned out to be the spacious, well kept home of his parents. His parents have moved to the Murray and have employed a young farmer William Jackson

from Herefordshire England, to help take care of the property. Will mentioned he had caved in England. Fortunately, they had recently received heavy rain in the area and Peter kindly permitted us to fill our water containers. This meant we did not have to stop at Ceduna, as Max was already caving with the group at Old Homestead. We bid Peter and Will farewell hoping to see them again some time.

We were a bit ahead of schedule and decided to take a quick look at Koonalda. The old homestead appeared to be cleaned up a bit and we set up camp under the verandah. In the morning we took a quick look at Koonalda doline before driving on to Eucla and Mundrabilla.

On the way to Mundrabilla we came upon a motor bike accident. A young couple returning from a Harley-Davidson rally in Perth had tipped their bike and trailer in the cross winds, leaving them injured in the middle of the road. Ken and Frank were the second vehicle on the scene and attended the injured couple while the chap in the other vehicle rang for an ambulance. We found out from Max later that the woman Debbie, had broken ribs and a damaged liver and had to be transported to Adelaide. While the driver of the bike Mark was stable, he had a broken collar bone. We waited for the local police to arrive and take over directing the traffic. We then went on our way feeling thankful that none of us were the injured party.

Later in the day our group arrived late at the prearranged stop at Mundrabilla Station before attempting the escarpment. While Ken and Frank waited, Lucy Eglington informed them that a cyclone was heading our way due to hit early hours of the morning. We had to decide as to whether we should make a run for it and go on to Old Homestead before the storm hits, or wait it out and camp at Thampanna. In the end we decided to set up camp at Thampanna. Ken took advantage of the time to survey an area that had been omitted in past surveys of the north-east section of the entrance chamber. This area is so near the entrance that it is usually by-passed.

We had strong winds and heavy rain throughout the night. We found that because of the cyclone the weather was surprisingly warm, requiring very little need for blankets. In the morning Ken went down the pitch and completed his survey of the entrance chamber and we all walked over to Hurricane Hole 6N483. On the walk back to camp the sky fell in and we were all soaked to the skin. There was nothing much we could do, but take ourselves to our tents and quietly wait for it to

pass. Most of us read while George retired to his tent and wrote poetry. Later in the day George, Frank and I went down Thampanna showing Ray the phreatic tubes while Ken continued surveying other small areas of the cave that needed his attention. After tea we checked the surface area looking for any sign of an entrance for bats, as we had seen bats quite a way in the cave. We could not find another opening of any kind.

Saturday 13th April, although we had more rain during the night, the ground appeared quite firm and it was decided that we should pack and head for Old Homestead while we could. We arrived in time to see the others, all 14 of them, packed and ready to leave. According to our notes they were not due to leave until the next day. Miles Pearce and Darryl Carr planned to stay a few days longer and we thoroughly enjoyed their company. When the others were about to leave local farmers from Ceduna, Garth and Clare Hoffrichter turned up with a load of wood on board. Apparently they often just take off while waiting for the rains to come. They had been following the railway line and decided to take a look at the cave.

Next morning 14th April, we were all up early and eager to enter the cave. George, Ken, Ray, Miles and Darryl went into the Trident Series. Here George had difficulty squeezing through the letter box which I am told now has been made into a parcel box. Frank was feeling unwell and stayed in his tent and I settled down to draw with pastels in the doline.

Next day Monday 15th April George, Frank, Ray and I set off down the cave to take a look at the Spring Series. Time was short as we hoped to be packed and off back to Thampanna before nightfall. When we came out 4 hours later, Miles and Darryl had already left, as they intended to take a back road through to Thampanna. Later we found that they had aborted the idea as it looked a bit wet and remote. On the way to Thampanna we stopped at Kestrel Nest Blowhole 6N383 and Rock Hole N1224 about 600 metres on our right. Ken and Frank had gone ahead and left a note that they had taken a track on the right about 66 km from Old Homestead. This track runs along the Mundrabilla Station boundary fence and had quite a bit of fence wire lying across the track. In this area we saw four horses, one very beautiful and I am told an ex race horse, he was so friendly he would eat apples from my outstretched hand. We arrived at Thampanna before the others as they had detoured to look at other features. This gave us time to prepare a curry and rice with damper before the others arrived. The Old Homestead survey group had arrived days before and most

of them were out sight seeing with Max Meth touring the many caves in the area.

Tuesday 16th, Ken, Frank and Ray went down Thampanna to start the first day of their survey. Most of the group from Old Homestead had gone off with Max to look at other caves and Miles and Darryl went off to Goat Cave. George and I went down Thampanna and set up my easel to draw, using two lamps and a borrowed carbide lamp from Gary Woodcock. George then went with Mark Sefton and Jacques while they photographed the cave for three and half hours. George then met up with Grant Gartrell and Julius Gheude taking them to the "Drain" and the "U Tube".

The first day of the survey saw Ken, Frank and Ray continue on from RDF DC, "Turkey's Nest" which was reached in 1995. It was noted that the female "white spider" has gone but quite a few footprints were found around her area. Ray noticed some stals that had been dissolved on one side "whatthellarewes", not unlike the effect seen in the "mud men chamber". Frank set a new record of 6 minutes to travel through the drain but it was noted he retired to his tent straight after his evening meal.

Wednesday 17th April, 2nd day of survey. The large surveying group from Old Homestead bid us farewell and Max then joined our party until the end of our trip. Ken, Frank and Ray continued their survey and went to the known end of "Seeing Red". There they pushed a little further and found, although somewhat painfully, a round trip via parallel joint controlled tubes, a way through is now possible. This route is now known as "Halelight Highway". According to Ken and Frank this series rejoices in black decoration, coffee and cream, with many tubular passageways full of decoration. One passage was totally blocked by decoration.

Thursday 18th, Ken, Frank and Ray continue the 3rd day of the survey going to the opposite end of Railway Tunnel, the south west end, a series of tubes were found leading south. These were examined and a parallel "Railway Tunnel" some 16 metres wide was found, although not long, was then surveyed. This tunnel carries flow coming from the "Heart Chamber". These complex tubes form a small maze which reconnects with the "Railway Tunnel" at several points. However according to Ken, the "Tunnel" is a complex breakdown passage, at times very unstable, though for those who persevere there is abundant gypsum decoration.

While Ken, Frank and Ray were surveying George, Max and I went to look at Liars Dare Cave 6N1347. This is quite a shallow cave full of dusty decoration of massive proportions that once must have been absolutely stunning but Max showed us several straws that were still dripping like jewels in a crown. While Max went off to dig just over the mound 6N1372 to 6N1375, I set up to draw just inside Liars Dare and George stripped off to his undies to sunbake.

Later we went onto Fern Cave 6N747 which as its name suggests, is quite a pretty entrance with about 3 different types of ferns growing in the 4 metre deep entrance. We found that Miles and Darryl were somewhere in the cave and proceeded down the ladder they had set up. Fern cave goes off in two directions, one looks very low and crawly. We decided to go the other way which is not much better. Found many little tiny bones and according to Jim McNamara of the SA Museum they were from the extinct Nailed Tailed Wallaby. We also found a perfect skull of a Crest-tailed Pouched Mouse (*Mulgara*). A sturdy, little short limbed, compact animal. We went on looking for Prostate Pit 6N1369 and found it just before dark, as it was late we decided to head back to camp and prepare tea.

Friday 19th April the surveyors decided to have a rest after the previous hard long day. Miles and Darryl were leaving for Mulla Mullang Cave and we also left early to show Ken, Frank and Ray the caves we had visited the day before. We went to Liars Dare 6N1347 and while they all looked through the cave I continued on with my drawing from yesterday. We then went onto Stegamite Cave 6N149. Ken was very keen to see this cave as he had been asked by Rauleigh Webb of WASG to keep a look out for any stegamite formations. Apparently they look like and get their name from the stone like plates that stand up like a ridge along the back of a prehistoric Stegamite. We found this to be another marvellous cave of dusty decoration of extreme beauty. After quite a bit of crawling we found several fine specimens of stegamites.

On the way back to camp we decided to call in on Bore 3 for a swim as Darryl Carr had stopped there the night before and said he had a wonderful swim, a good clean up and it felt marvellous. We were all keen until we took a look at the state of the water. Several dead crows had dissolved in the brackish water leaving only skulls floating on top of ink black water. We gave it a miss and wondered if Darryl was all right from his night swim. We dropped Max at a doline about 4 km from camp as he wished to continue his dig. We returned to camp and I made bread from a mixture I had

prepared in the morning. On returning we found we had visitors Arthur Clarke and Mick Williams from Tasmania. They were to join the Old Homestead group but had arrived too late. They had stopped at Thampanna looking for insects and spiders to take back to the Hobart Museum. They informed us that Lucy Eglington had warned them that another cyclone was on its way, due to hit during the night.

Saturday 20th April, what a night, warm, wet and windy, the cyclone had come through. I tried to make pancakes for breakfast but the rain was so heavy it filled the pan with water. We walked down to the cave and watched the water cascading over the edge of the pitch. Once again we all huddled in our tents, reading, writing poems and washing our clothes and hair. Later it cleared a bit and we all walked to hurricane Hole 6N483. Ken decided to go down and we all watched and waited at the top. He was gone for awhile and there was a very strong breeze blowing out of the cave. Later he returned quite distressed and very cut and scratched. He had returned to the wrong exit, he could hear us and see daylight but could not squeeze out. He called out for help but because of the breeze blowing we could not hear him. The entrance was around the corner from where he had tried so hard to climb out. Everything had looked right but it was not the same entrance. He was indeed quite a mess and his cuts and bruises quite nasty. We had no idea of his ordeal and were even a little flippant when he came out looking so tired. His wounds were inspected and photographed for documentation. Later they were used for a calendar.

Sunday 21st April Arthur brought out his collection of crickets that he had found in Thampanna. Several males, several females and a juvenile. We all viewed these with mixed feeling. Ken, Frank and Ray returned to continue the 4th day of the survey in which Frank crawled off through a long flattener and they went back to a rock filled breakdown chamber over shattered rock where they found a large amount of very beautiful gypsum.

While the others continued their survey George, Max and I set off to look for a few caves in the nearby area and found two small rock holes 6N1380 where Max built a cairn. A little further on we left the main track for an old track that had not been used for about 20 years. Max and I walked in front of the vehicle clearing rocks and branches, found nothing and returned to the main track. Later we found a small cave 6N1381 and stopped and looked at 6N753 which had a small breeze blowing out, we stayed awhile and added an extra metre to its length. Another 2 km and we left

the car on the edge of a clay pan and walked about 300 metres to Blowhole Cave 6N1381. Here Max and I stayed clearing out rocks and dirt and George walked to the other side of the clay pan to where Max said there should be another cave. Sure enough, a rather unusual cave with about 5 entrances, Tusk Cave 6N1382. This cave looked quite unusual as it has a sort of saddle of one large rock between various entrances on both sides. Both George and I explored for a while in what appeared to be a low cave with a shattered rock floor. The cave appeared to go for about 200 metres and the floor was littered with thousands of scats that according to Jim McNamara of SA Museum could only be rat Kangaroo or bush tailed possum. Both extinct on the Nullarbor.

Monday 21st April. It was decided that the surveyors had worked so hard that they would have an easy day and photograph some of the wonderful gypsum decorations they had found. Luckily I was invited to join them and we set off. Words cant describe some of the most beautiful decorations I have ever seen on the Nullarbor and the day long trip was tiring but very rewarding and I thank Ken and Frank for taking me to this wonderland. Thampanna is indeed becoming one of the best caves on the Nullarbor and continues to grow and surprise all who take the time to investigate her passages and chambers. Meanwhile George, Max and Ray went off to do some gardening at doline 6N731 and 6N1383 and 6N1384. Ray and George cooked a great tea of baked vegetables.

Tuesday 23rd April, Max had asked months ago for someone to help him survey Goat cave and I mentioned it to Ray and Ken who were very willing, but now Max had to be talked into going along. While they surveyed the main chamber and side passages, I did a large pastel drawing. Frank brought in his arm chair and had a well earned rest. Ken and Ray surveyed the very large chamber 150m x 55m that has an ancient rockfall beyond descending to the lowest point before halting at two small holes in a short chamber. Although they wore masks, the conditions encountered with guano was too hazardous to continue.

When we returned to camp, Rob Klok and Dawn Graves cave guides from Margaret River (CLINC) WA and Jan Scott, Anne and Peter Wood and Neil Taylor, guides from Leeuwin Naturaliste Ridge Western Australia had arrived and set up camp. Jan is a PR Officer with the Tourist Bureau and the others work for the Conservation and Land Management Department.

Wednesday 24th April Ken decided to walk to the far ridge for time out to meditate. Max, George, Frank, Ray and I went off tagging blowholes and searching for karst features. Our first find was blowhole 6N1385 just right of Kelly Bore. We then called in on Kelly Cave 6N165 and took a few photographs. This cave should be looked after better as it has quite a bit of live decoration that has been carelessly broken off. We went on to show Ray Gibbons Webb Cave and noticed quite a lot of fresh small decorations in the side chamber of the doline. We then went onto Snake Pit 6N133 and set up a ladder at the edge of the pitch. I was a bit reluctant but Ray, Frank and George went in without hesitation and I followed with some persuasion from George. Here we found 5 dead snakes in various stages of decay. One had died only days before. We noticed a wall had been built inside the cave as if someone had tried to turn it into a well. This cave had hundreds of crickets with many juveniles. They were even on my back when I came out of the cave. We also found a few very small jaw bones of the extinct Western Barred Bandicoot and the Crest-tailed Pouched Mouse (*Mulgara*). This cave has a very strong, almost cold breeze gushing out and we suspect that it could really go if someone wished to take the time to push it a bit further.

Thursday 25th April, Ken and Ray finished surveying Goat cave 6N745. George, Max, Rob, Dawn and I went off hunting for Anzac Cave and a few others but without luck. We did return to Fern Cave 6N747 where Rob collected a piece of fern for me to take back for identification. Later I found that this fern is quite rare and only grows in limestone in the Eyre Peninsular area. Hence this seems to be the only cave with it growing so beautifully.

Travelling on we came to a dig of Max's 6N1384. It is a bit unstable but has a lot of potential as the breeze is very strong. We all helped remove a few buckets of dirt before we left the area. We then went on to Prostate Pit 6N1369. This was a lovely cave quite shallow with lots of dusty decoration. It was like walking into an enchanted forest of petrified wood. In this cave we found quite a few Kestrel droppings.

Friday 26th April, with the survey of Thampanna finished for another year, we set off towards Madura station and Mullamullang. During their survey Ken, Ray and Frank had found several new passageways opening up new areas and chambers for investigation that no doubt will be continued on the next survey of this expanding cave. To celebrate the end of the survey Frank burnt his disgusting T shirt that went up in flames to the roar of the crowd.

As we packed and left we were all in high spirits and Max talked us into travelling along an old fence track that was becoming a bit too difficult when we came to a rocky doline 6N482 that had the track and fence running straight through it. We aborted this track and continued on to Madura station via the usual track when we found an abundance of features just inside the entrance gate. This was exciting; first a rock hole 6N1392, then a doline 6N1393, a small cave 6N1394, a blowhole 6N1395, rock hole 6N1396, and a large doline 6N1397. It was quite exciting and I am sure there was more but we had to move on before dark. Max even tagged a doline in the middle of the road. Nearer to Mullamullang we found another doline 6N1398. We eventually reached Mullamullang and set up camp with another carefully built fireplace by Ray.

Saturday 27th April 1996. We were all up early to see Frank and Ray off on their trip to the end of Mullamullang. We noted that it had been 30 years since the 1966 Survey Expedition and we sent them off with suitable documentation of the occasion. Max and Ken went off to survey South end of Mullamullang looking for an entrance into the main cave. I barred George from entering our tent unless he took a much needed wash, especially those feet, so he took advantage of the camp being deserted and cleaned up his act. I also took advantage, another photo for the calendar (**see front cover. Ed.**). After lunch George and I joined Ken and Max in the South entrance where they had found a way through to the main cave. Max had placed a cairn on the other side of the squeeze and you could see it through the opening, only its too tight to force ones way through. I prepared tea, made bread and a fruit slice leaving enough for Ray and Frank if they came out through the night.

Sunday 28th April, we were all surprised to find that Ray and Frank had returned early during the night. They had succeeded in their quest and had reached the end of Mullamullang returning at 11.00 PM. We had all slept on and missed giving them the heroes welcome we had planned. Later in the day we all set off to take photographs of Easter Extension. Ray and Frank although sore and a little tired joined us. This was an exciting and interesting day, as Frank had seen something running along the top of a sand mound about one and half km inside the cave. No one took him seriously at first and then we notice stacks of tiny tracks from a four footed animal running up over the sand mounds. On closer investigation we noticed that these tracks were chasing smaller different tracks that looked like they were made from some kind of insect. They were everywhere. We took photographs and

samples of scats to show Neville Pledge of SA Museum. Neville thought them interesting but could not identify them, he gave them to Jim McNamara who suggested that they could have been made by a native mouse, possibly a *Mulgara* that has found its way into the cave.

It was very disappointing to see that Easter Extension although very beautiful, has been damaged in many places with footprints right in the middle of extensive areas of coffee and cream. It was disappointing to know that people are so careless in areas that are clearly well marked with easily negotiable pathways.

Monday 29th April, we started the day by looking at a rock hole 6N699 Max had recently re-found within the camping area of Mullamullang. Later we said our goodbyes to Dawn and Rob and their party, they were on their way to a bird convention. On the way down the escarpment we stopped to look at road side cave 6N68 before calling into Cocklebidy Road House to ring home. We had been 26 days out on the Nullarbor, 26 days without showers and we stopped long enough only to buy pies and ring home.

Max has been telling me Murra-Ei-Elevyn 6N47 has a beautiful entrance, he was right. We were all a bit put off at first as we were only 5 km from the main road and you could hear the traffic. A bit much after being in the bush for 3 weeks. Still we soon adapted and Ray and Ken went for several long meditative walks.

Tuesday 30th April, after breakfast we went down to take a look at the cave entrance. Frank agreed to abseil in wearing only his harness and jocks while I took photographs. We had decided to make a calendar with the photographs I had taken of Ken's cut and bruised body and George naked washing his feet in the smallest of bowls. Now it was Frank's turn but he found it difficult to prusik back over the edge, especially without protective clothing.

It was decided that we should look at Knife Blowhole 6N94 as it was reasonably close, not far from Cocklebidy Road House. We found that Ken's ladder would not reach the bottom, and we had to abseil the 17 metres down a twisted bottle neck pitch into a bell shape chamber. I was first down followed by Frank. Once down we could see a side passage high up in the chamber where we thought the breeze could be coming from. At this stage it looked impossible to reach so we left to have a look at Cocklebidy Cave.

At Cocklebidy we all had a much needed dip in the lake. When we came out of the cave we

met three American cyclists who took one look at us and thought because of our half dried state that we were exhausted from being in this massive cave and started taking pictures of us. These chaps, Stan Havlick, Chuck Sanson and Drew Juen were cycling coast to coast, Perth to Sydney for the Hands-of-Hope International Cancer Research Institute in Colorado USA. They were staying the night at Cocklebidy Road House and had borrowed a car to take a look at the cave. That night Ray and I made pizza in the Dutch oven and surprisingly they turned out perfect.

Wednesday 1st May my birthday, I was greeted by a cold morning and a great birthday card signed by everyone. According to Max, Murra-Ei-Elevyn means "hand pushed down". An Aboriginal myth states that a monster came out of the cave and as he put his hand down to climb out, he pushed down forming the entrance of the cave. We walked down the steep slope that is full of light and colour to the edge of the water then negotiated the side wall around the edge of the lake into the next chamber. According to Ken the water level was much higher this year, so Frank and Ray went on, as I can't swim. They went for a fair way when Frank saw a colony of bats and decided to go no further. We came out for lunch and to change our wet clothes.

After lunch Ray went off for a two and a half hour walk, Ken and Frank had a few ideas about tackling that side passage in Knife Blowhole 6N94 and George and I returned to the cave to finally draw inside the entrance.

Ken, Frank and Max went off to the Cocklebidy rubbish dump to look for something to use as a grappling hook to enable them to hook into the side passage of 6N94. They found several items and decided to give it a go.

The idea was to survey this blowhole and to investigate the side passage. Frank went first followed by Ken. Frank prusiked up the rope for 6 metres which brought the rope into a nasty rub point. He decided to use his cow tail and clipped onto the ladder. He then proceeded to throw the grappling device, a heavy piece of square steel 30cm x 5cm at the hole. Every time he tried to hook into the hole he would go into a spin. This went on for a while until he snagged something, but what? After quite a bit of difficulty he managed to pull himself towards the hole but without success and eventually had to return to the floor. He had been an hour on the rope working all the time. He had a 2 min. rest and started again. He left the floor for the last time. He climbed up the ladder which was held by one crab, he found that he was being pulled in different

directions and he made a final effort to reach the hole. When he saw what his grappling iron had hooked onto his comment was S.H.T. Then he discovered he was the only fool (his words) to go there. The passage about 5 metres long was unstable and went nowhere. No breeze, nothing. Frank found the effort of getting out was just as hazardous and it required a double whale tail to control the speed back into the chamber. Frank returned in good spirits and willing to tell the story to whoever wants to hear it. **Well done Frank.**

When the survey was completed and Frank recovered they returned to camp where all were negotiating a surprise for my birthday. They had set up a runway of candles that Ken had brought from the church expecting that we could not light camp fires this year. He had also brought a wonderful fruit cake baked by one of his church ladies and white wine we had brought with us. I had been drawing down in the cave trying to finish before the light run out and it was dark when we returned. This group always make my birthday a wonderful occasion and I love it. Thanks fellas.

Thursday May 2nd saw us packing up ready to leave for Weebubbie. On our way we met up with the American cyclists and decided to stop and chat with them. They asked if we could take their bags on to Border Village as it saves them 4 miles (note miles) an hour in the head winds. They had been caught up in the cyclonic weather and were now running late as they were told they would have a tail wind most of the way across the Nullarbor. We took their bags and made arrangements to take them again the next day on to Nullarbor Road House.

We arrived at Weebubbie just before nightfall and decided to go straight to the cave lake and collect water that I had been asked to bring back for a friend of mine Tony Hamilton, a South Australian leading installation artist. He had worked for 2 years at the Nullarbor Road House in the 70's and had an exhibition opening in July called "Weebubbie Dream of the Kangaroo Girl". Tony uses installations and assemblages from found objects on the Nullarbor, a contemporary look at the metaphor of the culture of "outback Australia". He needed some water from Weebubbie for one of his pieces and although he has been to the edge of the doline, he was not confident to go further. Ray and Frank had never been to Weebubbie, so there were no objections to

camping there for the night. We collected the water and Ray and Ken carried it out on their backs. This was quite a job as we had collected 40 litres.

Everything comes to an end and for our last night around the camp fire Ken gave a splendid rendition from Gilbert and Sullivan's "Iolanthe" reciting "The Silver Kettle" and "The Dream Song", and Ray offered his tattered overalls as a final gesture to the flames.

Friday 3rd May on our way to Ceduna as arranged with the American cyclists, we picked up their huge bags from Border Village and as requested left them at Nullarbor Road House. A few days later the Americans turned up at Ceduna and stayed the night with Max. They said they thoroughly enjoyed his company and his recital on the piano. A week later they showed up in Adelaide and stayed the weekend with George and I. They asked to see our wineries and on the Sunday we took them to the Barossa Valley, a visit to Chris and Sandy Hales, the beach and a drive through Adelaide at night. Monday they set off early for Blanchetown the first stop on their way to Sydney. Two weeks later they called from Sydney to say they had arrived safe and sound.

Stan, who is 53, is a mountaineer and has climbed Mt.McKinley in Alaska. His climbing team will be heading for Pakistan in May 1997 to climb Mt.Gasherbrums 11, one of fourteen 8,000 metre peaks in the Himalayas. Stan will also be cycling across another continent sometime in 98 or 99, from the Black Sea to the Chinese coast. What drive and energy, we wish them well.

We have since heard from them and received an invitation to come see the Carlsbad Caverns in New Mexico 1998.

We received an invitation to the opening of Tony Hamilton's exhibition "Weebubbie Dream of the Kangaroo Girl". Water from Weebubbie Cave was used in a piece called "Weebubbie Bathers", using a large plastic water container, Australian Icon Elle Macpherson brand satin underwear and Weebubbie water.

JUNE MACLUCAS AUGUST 1996.

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TECHNICAL and OTHER ARTICLES

TWO YEARS ON THE ROAD

After two years the **INSIDE EARTH - CAVES BENEATH THE NULLARBOR** Art Exhibition of paintings, drawings and photographs has finally finished its tour.

This exhibition was seen by cavers, art lovers, art reviewers, school children and the general public at five different venues in 4 different states. It was never conceived as a travelling exhibition but after it opened at Prospect Art Gallery, Nailsworth, South Australia, March 1994, some comments were made that encouraged me to approach other possible venues in other states.

This was my first attempt at coordinating an exhibition. At this stage I had been caving, painting and sketching on the Nullarbor since 1992 with CEGSA. In the meantime I had been reading past Nullarbor reports and realised that the art world and general public had very little idea of the wonders beneath the Nullarbor Plains. From some of these reports I noticed names mentioned repeatedly, names like Captain J. Maitland Thomson, Elery Hamilton-Smith, Ian Lewis, Kevin Mott, and others. Nearly everyone that I approached agreed to take part in the exhibition, or they suggested others that I should approach to represent the best of Australian Cave Photography. Those suggested were Ken Boland (VSA) from Victoria, Jim Cundy (previous CEGSA member) from Murray Bridge, Norm Poulter (SRGWA) from Western Australia, Chris Brown (CDAA) from Nailsworth SA, and Nicholas N Birks from Walkerville SA, a photographer well known by the SA Museum for his unending patience of photographing bird life and bats at the entrances of caves.

The exhibition was starting to take shape. The pioneer caver Captain J. Maitland Thomson had been quite an influence upon caving in the Nullarbor, many had heard of his exploits. I went to see his Widow, Mrs Thomson and their family, and they agreed to lend us slides from his famous slide show, **THE CAVES OF THE NULLARBOR** dating from approx., 1934 to 1967. In keeping with the records, I invited other active cavers from CEGSA that showed potential as cave photographers, Steve Milner, Mark Sefton, and Gary Woodcock. I approached Terry Reardon a caver and one of CEGSA representatives at the Museum of South Australia. Terry presented a splendid display of Aboriginal artefacts, insects, rare mummified mammals and rare marine fossils found in the Nullarbor Caves. To represent the cave divers with CDAA, I approached Andrew Wight, Greg Bulling and Tony Carlisle to use their videos of cave diving on the Nullarbor to be played during the exhibition that was shown at all venues. Steve Milner and Lynne Wood wrote the articles for the catalogue and Jennifer Gregson designed the layout of the cover.

This was a large and exciting exhibition of over 50 little paintings, 7 large charcoal and pastels drawings and over 80 photographs. Artists had stopped painting caves since the turn of the century and photographs of caves by cavers had never been seen outside of clubrooms and caving magazines. We had created an interest in an area rarely seen by the general public, or the present art world and we were on our way to other cities and towns around Australia.

The exhibition was shown at Prospect Art Gallery, Nailsworth SA; Fremantle Art Centre, Fremantle; Riddock Art Gallery, Mount Gambier SA; St. Francis Pastoral Centre Art Gallery, Melbourne; and Broken Hill City Art Gallery, Broken Hill.

We had to send the work to Western Australia, Fremantle Art Gallery took up the rest of the expenses. After many letters we received sponsorship through Rossi Boots of Hilton SA. Eden Photographics, Kent Town SA, Safari 4x4 Centre, Windsor Gardens SA, and Mount Gambier Saw Works, Mount Gambier. Broken Hill City Art Gallery received a grant to include our exhibition at their Civic Art centre.

After we opened at Fremantle a few of our exhibitors declined to continue exhibiting but in the meantime we had picked up Rob Klok (CLINK) a Ranger from Margaret River WA. Bill Humphreys and others from The Museum of Western Australia participated by giving their time and effort to exhibit rare fossils, mummified mammals and other items found in the Nullarbor Caves. The Fremantle Art Gallery were extremely excited at the prospects of the Museum of WA exhibiting for the first time at their gallery. My thanks to all those concerned, for all their support, time and effort.

The remaining group now consisted of Kevin Mott, Elery Hamilton-Smith, Ken Boland, Nicholas N Birks, Norm Poulter, Rob Klok and myself. This worked out for the best, as we had less exhibiting space at the next few galleries that required a bit of thinning out of the work that we could show.

My grateful thanks must go to many people for making this touring exhibition possible but first many grateful thanks to all those who took part and to the sponsors for their support. My thanks also to CEGSA for their support and encouragement. My thanks also to the many cavers who attended the openings and for those who video taped these occasions.

Sincere thanks must go to Elery Hamilton-Smith for his great generosity, for the time, expense and effort he has shown throughout the duration of this exhibition. Firstly he opened the show at Prospect Art Gallery when he also gave a talk on **NULLARBOR PLAINS - HISTORY AND FUTURE**. This was attended by many people and was a highlight of the exhibition opening. He also opened the exhibitions at Riddock Art Gallery, Mount Gambier, St. Francis Pastoral Art Gallery in Melbourne and then made his way with Ken Boland to open the show at Broken Hill City Art Gallery, Broken Hill. All this at his own expense and time. I am very grateful Elery and thank you very much for your never ending support.

Many thanks to Norm and Rob Poulter in WA for putting up with me for a week while I was in WA for the opening. Thanks to Rauleigh Webb for opening the show in Fremantle, Marie Furey for showing me the sights.

Many thanks to Kevin and Julie Mott for my stay at Mount Gambier and many thanks Kevin for all your help in hanging the show, packing and storing the work until the time for it to be transported to Melbourne.

My grateful thanks to Ken Boland for making arrangements to have the show at St. Francis in Melbourne and for printing the invitations for this event. My grateful thanks for helping to hang the work, packing and storing the work in his tiny room until time for transportation to Broken Hill. Many thanks also for a memorable stay in the Bishops room at St. Francis and for driving all the way to Broken Hill for the opening.

This has been a busy but memorable tour with happy moments and memorable mishaps. I arrived at Fremantle Art Centre to be given brushes and paints and asked to paint the walls of the gallery the colours of the paintings. They made simulated doorways to look like cave openings. They said 15,000 were expected through the doors over the 1995 Xmas holiday period. They also said that the magnificent large building that house the gallery was haunted by the spirit of several of the inmates. It was first a Women's Prison and then for many years a Women's Mental Asylum. One event is mentioned in **LOOK AGAIN** by Miriam Howard-Wright, Concept Media, Leederville WA, 1991.

One of the highlights in Melbourne was meeting Ian Lewis, I had no idea it was him until he introduced himself. Ken and his fellow brothers made me very welcomed at St. Francis Monastery. I felt like Alice having tea at their huge high long, long table. At that time they were using only one end of the table and if a setting had been used before, you moved along. It was a joke but I was told "*move along, next one up,*" also said by the March Hare in Alice. The bath in my room, the Bishop's room, on the 2nd floor, had the biggest bath I have ever seen. Also the fastest drain when the plug is let out... A very loud Whooosh and no second chances.

At Broken Hill two large pieces of my art work arrived with the glass shattered. The young delivery driver was very apologetic and explained, it was not his fault but the company was insured for \$10,000. I told him this would pay for one. His distraught face was a delight to see. As there was no damage to the work itself, Gary Corbett ,the Gallery Director had them reframed in time for the opening. Ken, Elery, Pat Jones, (a friend of mine from Melbourne who also travelled to Broken Hill) and myself went sight seeing. The next day Broken Hill had a downpour, the first heavy rain for 3 years. It was a flash flood and Pat and I were going to the Art Centre to see The Bangarra Aboriginal Dance Theatre Company perform **OCHRES**. We had to battle along in raging 2 to 3 foot high water, clogged streets, without shoes and holding our dresses up. Pat was wet to her waist. The force of the water was so strong, one child fell from his bike and nearly drowned.

I have learnt much from this tour and made many friends I shall endeavour to keep. It has been an excellent opportunity to promote caves and caving amongst a wide and varied public. We were seen in reputable galleries in 5 major cities, appeared on local TV News, had interviews on Radio Stations and articles appeared in the local newspapers and art magazines. We started out as two different disciplines, the emotional artistic and the factual scientific but in the end it proved that there was no distinction between them, they were as one. The artisan was nature herself. I shall continue to paint and draw in caves and to exhibit wherever I can with the intention of portraying the wonders of our Australian Caves.

JUNE MACLUCAS, JULY 1996.

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MEMBERSHIP

Welcome to the new Associates:

Tina NOUTSOS 9608, Flinders University Hall, BEDFORD PARK SA 5042 (291-6226)

Angelique EGTBERTS 9609, eight Sherry Court, HACKHAM WEST SA 5163 (382-9595)

Change of Address:

Noel MOLLET 5514, PO Box 107, CULBURRA SA 5261 (085-75-8030)

Steve MILNER 9004, 30 McKenzie Street, CORAMANDEL VALLEY SA 5051

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LIBRARY AND RECORDS UPDATE

New Purchases for Library:

"Undara Volcano and its Lava Tubes" - A Geological Wonder of Australia in Undara Volcanic National Park, North Queensland. By Anne and Vernon Atkinson 1995.

Kindly donated by Ken Grimes was a copy of both the Abstracts and the Field Guide from the recent Karst Studies Seminar at Naracoorte 1996.

An assortment of second hand cave booklets on English, Welsh and Swedish Caves.

Incoming Records:

Received from Max Meth was a 30 page Bibliography on the Nullarbor dating from 19th Century to the present.

Max spent time over Xmas sorting through the Nullarbor files and placing this information on a data base.

Received from Kevin Mott a list of Newspaper articles from the Advertiser, Border Watch, Naracoorte Herald, The News, South Eastern Star, Penola Pennant, S.E. Times and The Sunday Mail. When completed this will exceed over 500 items collected by Fred Aslin, Kevin Mott and a thoughtful Librarian in the area called Nancy.

Received from Kevin Mott were photocopies from Microfilmed maps for which we had no paper copies.

Received from Peter Horne were three original maps of caves in the South East.

Received from Peter Ackroyd (VSA) were old drawings of archaeological diggings in Koonalda Cave, Nullarbor. These were handed to Peter from an estate. Copy of these maps have been handed onto the Museum of SA.

Received from Athol Jackson was a video copy of Cpt J. Maitland Thomson's 1951-52 Nullarbor Trip with St. Peters College. On the same video is a copy of the Mulla Mullang Expedition 1965-66 film.

Received a survey map from Ken Boland (VSA) of 6N94 Knife Blowhole, surveyed May 1996.

Surveying notes received from Ken Boland (VSA) of the latest survey of Thampanna Cave, Nullarbor, April/May 1996

Received map of Greys Hut 5F2 surveyed by Scout Caving Group.

David Trehearn has spent time sorting through the index of NSS Magazines and Mark Thiselton has placed all CDAA magazines on data base.

I am pleased to say there has been plenty of action in sorting and filing of the hundreds of articles in CEGSA records. This has been due to a wonderful response for assistance at the recent Working Bees. As well as the regulars Ray Gibbons and Graham Pilkington, we have been seeing regularly Anne Marie Hubycz, Tom Szabo and Bill Binks. Others that have turned up at the working bees have been Mark Thiselton, Lance Hoey and Dave Lowe. The last working bee saw the welcomed return of Ruth Lawrence. Ruth has been in NSW for the last 12 months. **WELCOME BACK RUTH.**

To hasten the procedure of entering items into a data base Graham Pilkington has lent CEGSA a computer. We now have 2 computers available for working bees. Thanks Graham.

Although we have started to see some headway this year in the sorting of the records, there are still plenty of files yet to be opened and sorted through. **COME AND JOIN US TO HELP MAKE OUR FILES EASIER TO LOCATE.**

GEORGE MACLUCAS
LIBRARIAN RECORDS OFFICER

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"KARST"

Review of computer programme

A few years ago Graham Pilkington, a life member of CEGSA, took the trouble to write a data entry programme for cave data. Currently this is written on PARADOX V4.5 (1993), A Borland International inc USA data-base programme for IBM compatible computers.

Graham's data-base system is known simply as "KARST".

It is an excellent tool for data entry.

Like most new things, "KARST" had a few teething problems but these are all resolved. I have been using the system for about 3 years for the Nullarbor region. Over this time there has inevitably been a few adjustments to the system and no doubt developments will continue.

"KARST" currently consists of about 50 separate tables, containing the karst data and associated information.

It requires a 486 computer (or better) to operate properly. On a 386 machine there will be loss of some facilities, AS WELL AS slow operation, although it will still work.

The Nullarbor region now has 2023 identified karst features, and "KARST" is handling this volume of data with ease. Note that only 1420 of these have N numbers, 603 are on a temporary list with X numbers, because location or other info is not adequate. Briefly, the type of data being recorded is:

- Karst number : and name (of cave).
- Location : map sheet name & map reference & description.
- Entrance : dimensions and description.
- Cave (if any) : dimensions and description.
- Land owner : and entry status.
- Tag : entrance photo, tag location.
- Historical : first written record of feature & trip reports.
- Other : flora, fauna (within cave & surrounding area).
- Maps : details of cave map number & surveyor.

Nullarbor records are now as complete as they ever have been AND records have never been so easy to access.

CEGSA members are now sought to enter details for the other caving regions of this state. Please write or ring me, or see Graham Pilkington for details.

Max G Meth

23 Aug 1996

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Obituary

Keith Quartermaine

Keith died near Kalgoorlie on Sunday 10 Dec 1995 aged 78. He died while driving to the Christmas party of the Eastern Goldfields Historical Society, having been a member for 47 years. Keith moved to Kalgoorlie from Perth in 1938.

Keith's association with caving started in Jan 1952 when he joined the Nullarbor expedition of Captain Jack M Thomson. Keith kept a note book of the trip and in 1967 wrote (an unpublished) book of 163 pages about it titled "The inland sea". This book now provides valuable historical information about the Nullarbor and its caves.

Keith was a lecturer in mining and engineering at the School of Mines in Kalgoorlie. In Jan 1955, with another lecturer, Harry Wheeler, Keith embarked on his 4th Nullarbor trip. It was on this trip that Harry suggested that they catalogue any karst features they found, and this was the start of the QW LIST. This eventually listed over 600 karst features on the Nullarbor, and it predated the numbering of karst features anywhere else in this country.

Keith wrote a total of 26 books on his travels, although in 1965 his chief interest turned to meteorites. Less than half of Keith's books deal with caves, though many meteorite trips were to the Nullarbor, and hence contain information of interest to cavers.

In 1976 Keith went on his last Nullarbor trip, having by then become more interested in historical matters. This final trip was essentially a historic exercise. With John Carlisle as leader, they investigated ship wreck sites along the coast of the Roe Plain.

The 26 books that Keith wrote about his trips are of course valuable historical records themselves. In addition Keith was a keen photographer, developing his own photos. During his life Keith took over 20,000 photos (over 500 36 exposure films). These photos detail many caves and other sites across the Nullarbor, as well as sites in other parts of Western Australia. Keith kept meticulous indexes of the photos, and the entire collection is held by the Historical Society in Kalgoorlie, including all original negatives. A more lasting contribution to history is difficult to imagine.

I met Keith on a few occasions. He provided me with copies of photos and of his books and he was always helpful friendly and interested in what I was doing. His wife Mavis also provided much assistance, being an expert on plant identification, as well as being involved in the Historical Society. Of course I regret that I never accompanied Keith on a field trip.

Keith will be sadly missed by all who knew him.

Max G Meth

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NORLD → ORCA → ACCREDITATION → COMPETENCY STANDARDS What does it all mean ??

In January this year the National Outdoor Recreation Leadership Development (NORLD) project completed its four years. In that time it grew from a symposium gathering at Pt. Sorrell, Tasmania in May 1992, to a national network of outdoor recreation practitioners across seven activities. (Rock Climbing, Caving, Canoeing, Rafting, Bushwalking, Cross Country Skiing, Abseiling)

The NORLD project had three foci, Competency Standards, Policy and Networking. The development of competency standards produced a high profile and often contentious face of NORLD. However, behind the scenes, as it were, the fourteen member national Board were very active in lobbying all levels of government to basically raise the profile of the recreation industry.

Since, 1993 the Australian Speleological Federation (ASF) has been represented on the NORLD Board through two seats allocated for the Activity Representatives. I held one of these seats and represented the seven activity groups. I also represented the ASF as the Caving Standards Convenor for NORLD.

During the time up to January this year the Activity Convenors have been working with their groups to develop national competency standards. In November, 1995 NORLD published the latest draft of the Competency Standards. Unfortunately, funding to finish the process was held up in government changes.

In January, 1996 the NORLD Board reviewed its directions and decided to dissolve and form an incorporated body to be known as the **OUTDOOR RECREATION COUNCIL of AUSTRALIA (ORCA)**.

In reviewing the achievements of NORLD and the future pressures for the recreation industry the interim ORCA Board developed a structure of three divisions, Advocacy, Industry Services and Standards & Training. The latter division is called the National Outdoor Recreation Leadership Division (new NORLD). This division will continue the work of developing National Competency Standards and will expand further than the mandate to which the old NORLD was bound and ensure that the quality of training delivery to meet the standards is developed and maintained.

During its life the old NORLD project developed a high profile within various circles and this became a major role and it is important that this be developed and is the main focus for the Advocacy division. The Industry Services divisions main focus is to develop the members in the outdoor recreation sector of the recreation industry.

Lets take a closer look at the three divisions. Advocacy ensures that we have a direct input into top levels of government and industry for issues such as access, education, insurance and risk management. Industry Services is to provide assistance to organisations, such as the ASF, in the development of the outdoor recreation industry and to facilitate the communication across industry groups such as, commercial operators, educators, volunteer / community groups and land managers/ stakeholders.

STANDARDS & TRAINING

NORLD is responsible for the development of national competency standards. These will provide a government (federal, state & local) recognised set of standard "benchmarks". Development of nationally recognised competency standards help set the benchmark against which individuals are required to be assessed.

This means that organisations such as TAFE, who provide courses in Canoeing, Caving etc., who want to ensure that their courses are nationally recognised must meet the national competency standard.

As previously stated, the ASF have been writing these standards and recently funding has been approved for ORCA to process the NORLD draft through to the final stage of approval by the Standards and Curriculum Council of Australia.

Therefore, nationally recognised activity competency standards will hopefully be endorsed by the end of 1996.

ASF STANDARDS:

During the ASF Council meeting of 1993 the Council moved to develop ASF Caving Leadership Curriculum Standards which will meet the national Caving Competency Standards. Thereby ensuring that the leaders in the ASF can be trained to meet the national competency standard.

The ASF standards provide the framework through which clubs can develop their own training and provide a resource for leaders who wish to learn caving at their own pace.

The ASF standards have been developed with three operational levels:

- Horizontal Caving Leader
- Laddering Caving Leader
- Vertical Caving Leader

There will also be "instructors" at each level and the ASF working group will commence writing these modules after completion of the above levels. These then provide a national basis for understanding within the Federation on the level of training / skill that members who wish to be leaders have achieved.

The ASF has set a timeline for the full implementation and integration of the scheme into the Federation by the end of 1999.

ACCREDITATION:

Currently there is no requirement for Leaders within the ASF to be accredited / certified. The Federation has decided to establish a training framework. The emphasis has always been on clubs to identify their training requirements and to issue qualifications, certificates, titles, membership status etc.

The advantages of following the ASF Caving Leadership standards is that if or when you decide to transfer your caving knowledge in to the "caving industry" ie: TAFE Outdoor Recreation Diploma, the industry will be able to easily recognise your prior learning. This is because you achieved your knowledge under a national framework that meets the national competency standards.

The ASF Scheme, as it has been called, will evolve as clubs utilise and begin to train their leaders. The Horizontal Caving Leader standards were released in 1995 with the remainder due for release mid 1996. Additional modules have already been identified for Search & Rescue, Cave First Aid, Survey & Mapping.

TOURISM:

NORLND has also been playing a major role in the development of the National Curriculum Framework for Adventure Guiding which is the outdoor recreation section of the tourism industry training. This covers "adventure" activities ranging from the Bushwalk to Four Wheel Driving.

Recently, ORCA has initiated input into the development of "interpretation" standards being developed by the Ecotourism Association of Australia.

THE FUTURE:

ORCA provides a conduit through which organisations such as Australasian Cave & Karst Management Assoc. (ACKMA) and the ASF can establish national competency standards.

ORCA was recently "launched" at the Risk Management in the Outdoors conference. Outcomes from this conference and the conference papers are soon to be released.

International affiliations have and are continuing to be developed. Especially with our Australasian neighbours, New Zealand, through their NZ Outdoor Instructor Association (NZOIA) and soon with the developing NZORC, and recently with the Outdoor Recreation Confederation of America (ORCA!).

Across Australia, as a result of the release of the draft national competency standards, ASF members are already involved in updating the training and education in organisations such as the Scout & Guide Associations, in establishing assessments for Commercial Operator licences for caving (WA, TAS) and a TAFE College (SA) has enhanced its course to comply with the standards.

The underlying philosophy of ORCA is to develop and promote a safe, quality outdoor recreation industry which is sensitive to environmental, cultural and social considerations.

SUMMARY:

The Federation is obliged under its aims & objectives to protect the cave environment. Education & Training is one way to ensure that we can achieve this.

ORCA has provided a conduit through which the Federation has been one of the leaders in establishing national activity standards.

Alan Jevons

ORCA Executive Director - Standards & Training (NORLND)
Convenor - ASF Caving Leadership Standards Working Group

Copies of the ORCA Standards, Orders for Risk Management Conference Report:
ORCA, PO Box 422, North Sydney NSW 2059
CEO. Rob Ridley (02) 9923 3275 Fax (02) 9923 4237

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LIFE MEMBERSHIP

Notice of Motion

The committee wish to recommend to the members that the honour of Life Membership be bestowed upon Max Meth. As required by clause 3(c) of the constitution voting on this issue will take place at the General Meeting to be held at the Royal Society of SA meeting room, Natural Science Building, South Australian Museum, at 7.30 PM on Wednesday 25th September 1996. Members are reminded that clauses 7(a), 7(b), 7(c), 11(b) and 11(c) will apply.

Max has performed an incredible amount of work for CEGSA, both in the field and in administration during the 25 years that he has been a member. Following is just a few of Max's exploits which have been extracted from CEGSA records. No doubt you can think of many more.

Editor.

Max Meth and CEGSA

Joined in 1971 and has been an active CEGSA member ever since.

Leather medals:

- 1972 for excavation work
- 1978 for steps from surface to cave at Corra Lynn Cave

Office Bearer positions held:

- Committee 1973-75 and 1987-90
- Librarian 1973-74
- Treasurer 1974 and 87-90
- Search & Rescue 1975
- Nullarbor Records 1991-96

Major activities:

Corra Lynn

- surface - fencing, steps, tree planting, road surfacing
- underground - survey, steps, bypasses, excavation/exploration discovering many km

Nullarbor

- Karst feature cataloguing - from about 400 in 1990 to nearly 2000 in 1996. Adding detailed information to those already known
- Has discovered many karst features
- Cave exploration - many km found
- Karst feature surveying - hundreds !

Other Regions; especially Naracoorte, Flinders and Eyre Peninsula

- Cave discoveries - many new ones found
- Cave exploration

Graham Pilkington

%%%%%%%%%

21st BIENNIAL ASF CONFERENCE

As you can see from the flyer enclosed with this issue of CEGSA NEWS the 1997 ASF Conference is being held at Quorn in the Flinders Ranges over the Easter period. CEGSA has hosted the conferences on the past 3 occasions (1956-7, 1968-9 and 1980-1) but the work load has been spread over all the clubs in SA through the SA Speleological Council. We hope that you will be able to attend and will also be able to assist the organising committee with the myriad tasks required if asked to do so. It would also be appreciated if anyone who thinks that they can assist in some way to put their name forward to the CEGSA Committee.

Editor.

INDEX TO VOLUME 40

Volume 40 contained the following issues:

- | | |
|----------------------|----------------------|
| 40 (1) February 1995 | 40 (2) May 1995 |
| 40 (3) August 1995 | 40 (4) November 1995 |

The index is divided into the following categories

Caving activity by region

Technical and Other articles

Key to abbreviations used in this index

B Biological	Bo Botanical	D Description	
Di Diving	E Exploration	F Fantasy	
H History	L Locate	M Map	
P Photography	Pa Paleontology	S Surveying	
Sc Scientific	SR Search & Rescue	T Tourist	
Tg Tagged	Tr Training	W Work	

CAVING ACTIVITY

Caving activities are listed by Cave Number, Newsletter Reference, Author, and Type of activity.

ADELAIDE HILLS

A16	40 (4) p85	R Gibbons	E, S
	40 (4) p97	G MacLucas	E, H
Gawler Br	40 (4) p95	P Harper	Tr

EYRE PENINSULA

No Trips

FLINDERS RANGES

No Trips

KANGAROO ISLAND

No Trips

LOWER SOUTH EAST

L1	40 (1) p17	K Mott	E
L5	40 (4) p94	K Mott	S
L8	40 (1) p17	K Mott	
L10	40 (4) p100	C Hales	T
L13	40 (1) p17	K Mott	E
	40 (4) p100	C Hales	T
L18	40 (1) p17	K Mott	E
L19	40 (1) p17	K Mott	T
L25	40 (4) p94	K Mott	S
L34	40 (4) p100	C Hales	E
L40	40 (4) p100	C Hales	T
L43	40 (1) p17	K Mott	
L61	40 (4) p100	C Hales	T
L69	40 (1) p17	K Mott	E
L74	40 (1) p17	K Mott	E
	40 (4) p94	K Mott	S
L81	40 (1) p17	K Mott	S

	40 (4) p100	C Hales	T
L84	40 (4) p100	C Hales	T
L86	40 (4) p100	C Hales	E
L107	40 (4) p94	K Mott	S
L119	40 (1) p17	K Mott	E
	40 (4) P94	K Mott	SR
L136	40 (4) p100	C Hales	T
L174	40 (4) p100	C Hales	E
L236	40 (1) p18	K Mott	E
L262	40 (1) p17	K Mott	E
L263	40 (1) p17	K Mott	E
L307	40 (1) p17	K Mott	E
L308	40 (4) p94	K Mott	S
L321	40 (4) p108		D
L322	40 (4) p108		D
L323	40 (4) p108		D
L324	40 (4) p108		D
L325	40 (4) p108		D
L326	40 (4) p108		D
L327	40 (4) p108		D
L328	40 (4) p108		D
L329	40 (4) p108		
L330	40 (4) p108		D
L331	40 (4) p108		D
L332	40 (4) p108		D
L333	40 (1) p17	K Mott	D, E
	40 (4) p108		D
L334	40 (1) p17	K Mott	D, E
	40 (4) p108		D
L335	40 (1) p17	K Mott	D, E
	40 (4) p100	C Hales	E, S
	40 (4) p108		D
L336	40 (1) p18	K Mott	D, E
	40 (4) p108		D
L337	40 (4) p94	K Mott	S
	40 (4) p109		D
L338	40 (4) p109		D

L339	40 (4) p100	C Hales	E
	40 (4) p94	K Mott	S
	40 (4) p109		D
L340	40 (4) p109		D
L341	40 (4) p109		D
L342	40 (4) p109		D
L343	40 (4) p109		D
L344	40 (4) p109		D
L345	40 (4) p109		D
L346	40 (4) p109		D
L347	40 (4) p109		D
L348	40 (4) p94	K Mott	S
L349	40 (4) p109		D
L350	40 (4) p109		D
L351	40 (4) p94	K Mott	E, S
	40 (4) p109		D
L352	40 (4) p94	K Mott	E, S
	40 (4) p109		D
L353	40 (4) p94	K Mott	E, S
	40 (4) p109		D
Mt Gam	40 (4) p94	K Mott	E
Scrimber	40 (4) p94	K Mott	E

MURRAY PLAINS

M1	40 (1) p16	M Thiselton	E
	40 (3) p 55	S Milner	H
	40 (3) p58	M Sefton	S
	40 (3) p61-64		M

NULLARBOR PLAINS

N	40 (2) p32-34	M Meth	H
N1	40 (2) p34	M Meth	H
N2	40 (1) p7	M Meth	Tg
	40 (2) p34	M Meth	H
	40 (2) p38	M Thiselton	Di
	40 (3) p52	M Meth	H
N3	40 (1) p7	M Meth	E
	40 (2) p34	M Meth	H
	40 (2) p36	M Meth	E
	40 (2) p39	M Thiselton	E
	40 (2) p40	M Thiselton	T
	40 (3) p52	M Meth	H
N4	40 (1) p14	M Meth	P, Tg
	40 (2) p33	M Meth	H
	40 (2) p35	M Meth	B, E
N5	40 (2) p34	M Meth	H
N6	40 (2) p34	M Meth	H
N7	40 (2) p33	M Meth	H
N8	40 (2) p33	M Meth	H
N9	40 (2) p33	M Meth	H
N13	40 (2) p33	M Meth	H
N16	40 (1) p15	M Meth	T
	40 (2) p34	M Meth	H
N17	40 (1) p7	M Meth	P, Tg
	40 (2) p34	M Meth	H
	40 (2) p36	M Meth	
	40 (2) p39	M Thiselton	E
	40 (3) p52	M Meth	H

N18	40 (2) p33	M Meth	H
N19	40 (3) p52	M Meth	H
N20	40 (1) p13	M Meth	Tg
N22	40 (2) p33	M Meth	H
N23	40 (2) p33	M Meth	H
N24	40 (1) p7	M Meth	E
N26	40 (1) p14	M Meth	D, L, Tg
	40 (2) p35	M Meth	Tg
N27	40 (1) p13	M Meth	H, Tg
N32	40 (1) p14	M Meth	
	40 (2) p33	M Meth	H
N33	40 (1) p14	M Meth	
	40 (2) p33	M Meth	H
N34	40 (2) p38	M Thiselton	
N35	40 (2) p35	M Meth	
	40 (4) p91	J MacLucas	E
N36	40 (4) p91	J MacLucas	E
N37	40 (2) p34	M Meth	H
	40 (2) p35	M Meth	E
	40 (4) p89	J MacLucas	E, P
N38	40 (2) p35	M Meth	E
	40 (4) p90	J MacLucas	
N39	40 (2) p35	M Meth	E
	40 (4) p90	J MacLucas	E
N40	40 (2) p35	M Meth	E
	40 (4) p90	J MacLucas	
N41	40 (4) p91	J MacLucas	E
N42	40 (2) p35	M Meth	E
N43	40 (4) p89	J MacLucas	Bo, E
N44	40 (2) p39	M Thiselton	E
N45	40 (2) p39	M Thiselton	E, SR
N46	40 (4) p93	J MacLucas	E, P
N47	40 (2) p34	M Meth	H
	40 (3) p54	M Meth	H
N48	40 (2) p34	M Meth	H
	40 (3) p54	M Meth	H
N49	40 (2) p34	M Meth	H
N56	40 (1) p4	P Kraehenbuehl	D, S
	40 (1) p5		M
N57	40 (2) p34	M Meth	H
	40 (3) p54	M Meth	H
N62	40 (2) p34	M Meth	H
	40 (3) p53	M Meth	H
N63	40 (1) p9	M Meth	T
	40 (4) p86	J MacLucas	
N64	40 (2) p34	M Meth	H
N70	40 (2) p34	M Meth	H
	40 (2) p35	M Meth	E
	40 (2) p37	M Meth	D, L, Tg
	40 (4) p91	J MacLucas	E, P
N75	40 (3) p54	M Meth	D, Tg
N83	40 (1) p10	M Meth	Tg
	40 (2) p36	M Meth	E
N85	40 (2) p32	M Meth	T
N93	40 (2) p37	M Meth	D
N96	40 (2) p32	M Meth	T
N97	40 (2) p32	M Meth	T
N98	40 (2) p32	M Meth	T
N120	40 (2) p33	M Meth	H
N132	40 (1) p9	M Meth	T

	40 (3) p53	M Meth	H	N586	40 (3) p52	M Meth	H
	40 (4) p88	J MacLucas	P	N587	40 (1) p7	M Meth	D, Tg
N133	40 (3) p53	M Meth	H		40 (3) p52	M Meth	H
N133	40 (1) p9	M Meth	T	N588	40 (1) p7	M Meth	D, L, Tg
	40 (2) p36	M Meth	E		40 (3) p52	M Meth	H
N137	40 (1) p8	M Meth		N589	40 (1) p7	M Meth	D, Tg
N150	40 (1) p14	M Meth	D, Tg		40 (3) p52	M Meth	H
N152	40 (1) p12	M Meth	D,L,S,Tg	N590	40 (3) p52	M Meth	H
	40 (2) p36	M Meth	L	N592	40 (3) p52	M Meth	H
N160	40 (4) p92	J MacLucas	Bo,D,E,P	N598	40 (3) p52	M Meth	H
N165	40 (1) p9	M Meth	T	N611	40 (1) p8	M Meth	L, Tg
	40 (4) 86	J MacLucas	T	N612	40 (1) p8	M Meth	L
N166	40 (1) p12	M Meth	D, L,Tg		40 (4) p88	J MacLucas	
	40 (2) p36	M Meth		N613	40 (4) p88	J MacLucas	
N167	40 (1) p12	M Meth	D, L,S,Tg	N640	40 (3) p53	M Meth	H
N169	40 (1) p7	M Meth	D,Tg	N641	40 (3) p53	M Meth	H
	40 (3) p52	M Meth	Tg	N660	40 (2) p34	M Meth	H
	40 (2) p34	M Meth	H		40 (3) p53	M Meth	H
N176	40 (2) p34	M Meth	H	N687	40 (1) p11	M Meth	D,L,S,Tg
N178	40 (1) p13	M Meth	Tg	N688	40 (1) p11	M Meth	Tg
N179	40 (1) p14	M Meth	D, L,Tg	N689	40 (1) p11	M Meth	Tg
N191	40 (3) p54	M Meth	H	N694	40 (1) p7	M Meth	
N192	40 (3) p53	M Meth	H	N700	40 (4) p92	J MacLucas	D, E
N193	40 (3) p53	M Meth	H	N707	40 (1) p9	M Meth	
N195	40 (2) p37	M Meth	D, L,Tg	N718	40 (1) p9	M Meth	L, Tg
N206	40 (1) p8	M Meth	S	N719	40 (1) p9	M Meth	Tg
	40 (2) p41	K Boland	S	N722	40 (1) p10	M Meth	L
	40 (4) p87	J MacLucas	Bo, S, P	N730	40 (1) p9	M Meth	
N207	40 (1) p14	M Meth	D, Tg	N731	40 (1) p9	M Meth	L
N212	40 (1) p13	M Meth	L, Tg	N734	40 (1) p7	M Meth	Tg
	40 (2) p33	M Meth	H	N735	40 (1) p12	M Meth	Tg
N225	40 (2) p33	M Meth	H	N736	40 (1) p11	M Meth	Tg
N258	40 (2) p32	M Meth	L	N737	40 (1) p12	M Meth	Tg
N266	40 (1) p13	M Meth	L, Tg	N741	40 (1) p9	M Meth	
N280	40 (2) p33	M Meth	H	N742	40 (1) p8	M Meth	L, S
N316	40 (1) p13	M Meth	Tg	N743	40 (1) p9	M Meth	D, L
N321	40 (2) p33	M Meth	H	N745	40 (1) p9	M Meth	E
N328	40 (1) p7	M Meth			40 (4) p88,89	J MacLucas	P, E
N342	40 (3) p53	M Meth	H	N750	40 (2) p36	M Meth	D, E
N346	40 (1) p6	M Meth	T	N791	40 (3) p53	M Meth	H
N348	40 (1) p12	M Meth	D, L, Tg	N797	40 (2) p37	M Meth	D, H, Tg
N358	40 (1) p7	M Meth	D, L, Tg	N869	40 (4) p93	J MacLucas	Tg
N359	40 (2) p36	M Meth	Tg	N870	40 (4) p93	J MacLucas	Tg
N360	40 (2) p36	M Meth	Tg	N871	40 (2) p33	M Meth	H
N370	40 (2) p36	M Meth	L, Tg	N877	40 (1) p13	M Meth	L
N371	40 (1) p10	M Meth	D, S, Tg		40 (2) p35	M Meth	T
N372	40 (1) p10	M Meth	D,L,S,Tg	N887	40 (2) p37	M Meth	D, L,Tg
N383	40 (1) p11	M Meth	Tg	N888	40 (2) p37	M Meth	D, L,Tg
N388	40 (1) p11	M Meth		N889	40 (2) p37	M Meth	L
N390	40 (2) p33	M Meth	H	N903	40 (2) p37	M Meth	D, L,Tg
N400	40 (1) p10	M Meth	B,D,L,S,Tg	N946	40 (1) p10	M Meth	H
N405	40 (1) p10	M Meth	L, Tg	N973	40 (1) p12	M Meth	D, H,Tg
N406	40 (1) p10	M Meth	B, L		40 (2) p36	M Meth	L
N414	40 (1) p10	M Meth	D, L, Tg	N974	40 (1) p13	M Meth	D,L,S,Tg
N431	40 (2) p36	M Meth	D	N975	40 (1) p12	M Meth	D,H,L,S,Tg
N481	40 (2) p36	M Meth	Tg	N976	40 (1) p11	M Meth	D,H,L,S,Tg
N530	40 (3) p53	M Meth	H	N977	40 (1) p12	M Meth	D,H,L,S,Tg
N568	40 (2) p37	M Meth	L, Tg	N978	40 (1) p12	M Meth	D,H,L,S,Tg
N579	40 (2) p36	M Meth	Tg	N980	40 (1) p13	M Meth	D, L, Tg
N585	40 (1) p7	M Meth	Tg	N981	40 (1) p11	M Meth	D, S, Tg

N983	40 (1) p12	M Meth	L, Tg	N1223	40 (1) p11	M Meth	D, L, S Tg
N988	40 (1) p12	M Meth	L	N1224	40 (1) p11	M Meth	
N995	40 (2) p35	M Meth	Tg	N1225	40 (1) p12	M Meth	D, L, S,Tg
N998	40 (1) p13	M Meth		N1226	40 (1) p12	M Meth	D, L, S Tg
N995	40 (1) p14	M Meth	D, L, Tg	N1227	40 (1) p12	M Meth	D, S, Tg
N999	40 (1) p14	M Meth	D, H, L	N1228	40 (1) p12	M Meth	D, L, S,Tg
N1001	40 (1) p13	M Meth	L, Tg	N1229	40 (1) p13	M Meth	D,H,L,S,Tg
N1015	40 (2) p36	M Meth	D, L	N1230	40 (1) p13	M Meth	D, L, S,Tg
N1017	40 (2) p36	M Meth	L	N1231	40 (1) p13	M Meth	D, L, Tg
N1029	40 (1) p13	M Meth	Tg	N1232	40 (1) p13	M Meth	L, Tg
N1043	40 (2) p33	M Meth	H	N1233	40 (1) p13	M Meth	L, Tg
N1048	40 (1) p13	M Meth		N1234	40 (1) p14	M Meth	D, Tg
N1049	40 (2) p34	M Meth	H	N1235	40 (1) p14	M Meth	Tg
N1057	40 (2) p34	M Meth	H	N1236	40 (1) p14	M Meth	D
N1063	40 (1) p14	M Meth		N1237	40 (1) p14	M Meth	D, H, Tg
N1065	40 (1) p14	M Meth	L,Tg	N1238	40 (1) p14	M Meth	L, Tg
N1068	40 (1) p14	M Meth		N1239	40 (1) p15	M Meth	D,Tg
	40 (2) p34	M Meth	H	N1278	40 (2) p36	M Meth	D, L
N1085	40 (2) p37	M Meth	D, L, Tg	N1279	40 (2) p36	M Meth	D, L
N1091	40 (3) p54	M Meth	H	N1280	40 (2) p37	M Meth	Tg
N1108	40 (3) p54	M Meth	H	N1281	40 (2) p37	M Meth	D, L, Tg
N1109	40 (3) p54	M Meth	H	N1282	40 (2) p37	M Meth	D, L, Tg
N1186	40 (1) p6	M Meth	D	N1283	40 (2) p37	M Meth	D, L, Tg
N1187	40 (1) p6	M Meth	D, L	N1284	40 (2) p37	M Meth	D, L, Tg
N1188	40 (1) p7	M Meth	D, L,S,Tg	N1285	40 (2) p37	M Meth	D, L, Tg
N1189	40 (10 p7	M Meth	D, L, Tg	N1289	40 (2) p34	M Meth	H
N1190	40 (1) p7,8	M Meth	D, L, Tg		40 (4) p92	J MacLucas	E
	40 (4) p88	J MacLucas		N1293	40 (2) p37	M Meth	
N1191	40 (1) p7,8	M Meth	D, L, Tg	N1294	40 (2) p37	M Meth	
N1192	40 (1) p8	M Meth	D, L, S	N1295	40 (2) p37	M Meth	
N1193	40 (1) p7	M Meth		N1315	40 (4) p88	J MacLucas	S, Tg
N1194	40 (1) p8	M Meth	D, S, Tg	N1317	40 (4) p89	J MacLucas	D
N1195	40 (1) p8	M Meth	D, S, Tg	N1318	40 (4) p89	J MacLucas	D
N1196	40 (1) p8 (x2)	M Meth	D, H, L,Tg	N1320	40 (4) p90	J MacLucas	
N1197	40 (1) p8,9	M Meth	D, S, Tg	N1321	40 (4) p90	J MacLucas	
N1198	40 (1) p9	M Meth	D, L, S,Tg	N1322	40 (4) p90	J MacLucas	Bo, D, E,L
N1199	40 (1) p9	M Meth	D, L, S,Tg	N1323	40 (4) p91	J MacLucas	
N1200	40 (1) p9	M Meth	L, Tg	N1326	40 (4) p92	J MacLucas	L
N1201	40 (1) p9	M Meth	D, H, L,Tg	N1327	40 (4) p90	J MacLucas	
N1202	40 (1) p9	M Meth	D, L, S,Tg	x39	40 (1) p11	M Meth	L
N1203	40 (1) p9	M Meth	D, L, S,Tg	x54	40 (1) p7	M Meth	L
N1204	40 (1) p9	M Meth	D, L, S,Tg	x57	40 (1) p9	M Meth	
	40 (2) p36	M Meth	L	x63	40 (1)p8	M Meth	L
N1206	40 (1) p9	M Meth	D, L, S,Tg	x65	40 (1) p7	M Meth	
N1207	40 (1) p10	M Meth	D, L, Tg	x66	40 (1) p7	M Meth	L
N1208	40 (1) p10	M Meth	D, L, Tg	x67	40 (1) P7	M Meth	L
N1209	40 (1) p10	M Meth	D, L, S,Tg	x68	40 (1) p9	M Meth	
N1210	40 (1) p10	M Meth	D, L, S,Tg	x69	40 (1) p11	M Meth	L
N1211	40 (1) p10	M Meth	D, L, S,Tg	x71	40 (1) p13	M Meth	L
N1212	40 (1) p10	M Meth	D, Tg	x73	40 (1) p15	M Meth	
N1213	40 (1) p10	M Meth	D, L, S,Tg	x74	40 (1) p15	M Meth	L
N1214	40 (1) p10	M Meth	D, L, S,Tg	x76	40 (1) p9	M Meth	D
N1215	40 (1) p11	M Meth	D, L, Tg	x84	40 (2) p37	M Meth	D, H, L
N1216	40 (1) p11	M Meth	D, L, S,Tg	x96	40 (2) p33	M Meth	H
N1217	40 (1) p11	M Meth	D, L, S,Tg		40 (3) p53	M Meth	H
N1218	40 (1) p11	M Meth	D, L, S,Tg	x97	40 (3) p53	M Meth	H
N1219	40 (1) p11	M Meth	D, L, S,Tg	x158	40 (1) p10	M Meth	
N1220	40 (1) p11	M Meth	D, L, S,Tg	x168	40 (2) p35	M Meth	L
N1221	40 (1) p11	M Meth	D,H,L,S,Tg	x169	40 (2) p36	M Meth	Tg
N1222	40 (1) p11	M Meth	D, L, S,Tg	x170	40 (2) p36	M Meth	L

x171 40 (2) p36 M Meth
 x248 40 (2) p33 M Meth H
 x428 40 (2) p33 M Meth H
 x430 40 (2) p33 M Meth H
 x431 40 (2) p33 M Meth H
 x432 40 (3) p54 M Meth H
 x433 40 (3) p54 M Meth H

Hurricane

Hole 40(4)p88 J MacLucas E

Purple

Goringe 40(2)p36 M Meth

UPPER SOUTH EAST

U1 40 (3) p73 R Lawrence T
 40 (3) p76 R Simms
 U4 40 (3) p73 R Lawrence T
 U7 40 (3) p73 R Lawrence
 40 (3) p76 R Simms
 U8 40 (3) p73 R Lawrence T
 40 (4) p85 E Rubessa E, P
 U10 40 (3) p76 R Simms T
 U14 40 (3) p76 R Simms Bo
 U26/27 40 (3) p75 R Simms Bo
 U33 40 (3) p75 R Simms
 40 (4) p84 E Rubessa E
 U38 40 (3) p76 R Simms
 U39 40 (3) p76 R Simms
 U46 40 (3) p76 R Simms
 U47 40 (3) p73 R Lawrence E, SR
 40 (3) p76 R Simms
 U48 40 (3) p76 R Simms
 U49 40 (3) p73 R Lawrence S
 U50 40 (3) p73 R Lawrence S

U63 40 (3) p73 R Lawrence S
 U66 40 (3) p76 R Simms Bo
 U73 40 (4) p84 E Rubessa E
 U81 40 (3) p75 R Simms Bo
 U82 40 (3) p75 R Simms Bo
 U89 40 (3) p75 R Simms Bo
 U108 40 (3) p75 R Simms
 U120 40 (3) p75 R Simms
 U125 40 (4) p84 E Rubessa E
 U153 40 (1) p18 K Mott D, S
 U154 40 (1) p19 K Mott D, S
 U155 40 (1) p19 K Mott D, S
 U156 40 (1) p19 K Mott D, S
 U157 40 (1) p19 K Mott D, S
 U158 40 (1) p19 K Mott D, S
 U159 40 (1) p19 K Mott D, H
 3xU/NadjU153 40(1)p18K Mott D
 U/N 40 (3) p76 R Simms

YORKE PENINSULA

Y1 40 (4) p93 P Harper E
 40 (4) p95 P Harper E
 40 (4) p96 G Pilkington E, S
 40 (4) p97 P Harper E
 40 (4) p99 G MacLucas P
 40 (4) p100 C Hales E
 40 (4) p100 G MacLucas E

INTERSTATE & OVERSEAS

3ASF20 40 (1) Cover M
 3G6 40 (1) p17 K Mott T

TECHNICAL AND OTHER ARTICLES

Technical and Other Articles list the Title of the article, Newsletter reference and the Author.

Caving Leadership Scheme	40 (2) p43	M Choi
Cave Leadership Update	40 (4) p102	P Kraehenbuehl
Index Vol 39	40 (1) p 23	
Nullarbor QW list of Harry Wheeler	40 (2) p47	M Meth
Nullarbor, Quartemaine trips	40 (3) p52	M Meth
OP5 Update - L	40 (4) p108	
Rendelsham Cave Development	40 (1) p22	K Mott
Search & Rescue Call out	40 (1) p20	K Mott
Sellicks Hill Quarry Cave Postcards	40 (1) p21	
Sellicks Hill quarry Cave Update	40 (3) p78	A Jevons
Structural Integrity of S102	40 (3) p74	R Simms
Tackle Hauling	40 (1) p21	
Tales of a Brolga (hauling frame)	40 (2) p44	M Thiselton
Training Day & Xmas Party	40 (1) p15	M Macdonald
Weebubbie Cave - Discovery	40 (4) p104	M Meth