

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.

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Website Trip Log	All Trip Coordinators	See list p65

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SA Speleological Council	Ian Lewis	As Above
Kanawinka Geopark Liaison	Ian Lewis	As Above
CDAA liaison	Ian Lewis	As Above
SA Scout Liaison	Ian Lewis	As Above

Cover Photograph: Dr. Liz Reed accepting her award. (see article p67)

Photo: Amy Maynard, Naracoorte Herald.

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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 or background material for Volume 63 Number 4 (Issue 252) must reach the Editor by Wednesday **21st November 2018**. 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 a memory stick or CD, in Word *.doc(x) or *.rtf files. Of course other forms of communication will still be gratefully accepted. Photographs are preferred to be in colour as separate files and note in the article where to be inserted. (*.jpg format under 500Kb unless for the cover).

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

The Thai Rescues

What an absorbing and deeply concerning series of events was the unfolding of the Thailand cave rescue recently! Those of us who know about caves immediately saw the terrible risk to the lives of the team of young soccer boys and their coach, as caving history around the world has too many examples of people being trapped in cave systems by rapidly-rising floodwaters. Of course the problem to the inexperienced is that the source of the waters is often way out of sight (and out of mind) up along mountain ridges and hillslopes where surface water gathers during distant storms and cloudbursts, sheeting off hillsides into streamways and pouring into cave systems where the landscape changes to fractured limestone. Cave systems in South Australia virtually don't have stream systems as almost all of our limestone is wide flat absorbent sheets where surface water soaks into the groundwater table. We have had a few exceptions – the flash floods into Pannikin Plains Cave 30 years ago on the Nullarbor which trapped Ron Allum and other cave divers, evidence of flash floods in Thampana and Old Homestead Caves, and the artificial waterfalls of Mount Gambier's Cave Gardens taking storm drainage from the streets and gutters of the city.

There is more to be understood about the Thailand rescue and it may be in time that the cave divers or others choose to explain further details if and when they are ready. We were all agog at the sight of those young boys' faces when first located by the British cave divers – surely those are the photo images of this century so far! The media are vital in a communicative world but were handled carefully and allowed to present the extent of the rescue operation while not getting in the road or misinforming. This is vital in any rescue operation despite the public demand for information. In the end, I think most reports were responsible and as adequate as possible for the circumstances. We can all remember those days of lengthy preparation prior to the final decision to bring the boys out underwater when no upper cave entrances could be located. Plans to maintain and support them inside a small damp chamber for months until the rains ceased were never practical, particularly with the unpredictability of stormwaters through a monsoon season. We can also remember the final days when each small group of boys were brought out – *successfully*. I am certain that most cavers were not at all sure that all the boys could survive the extraction process. As a diver, I was wondering about simple but vital things such as equalising ears to prevent eardrum damage and the concern of facemasks leaking or flooding for a young boy in water-filled darkness. We train advanced cave divers in a series of exercises to deal with such things but in controlled environments – this was in the raw and at the cutting edge of nature in real world adverse circumstances.

And then miraculously they were all out and alive! This was undoubtedly a cause for celebration all around the world, similar to the recovery of the miners in Chile or in Tasmania several years ago. While that was being celebrated, I did have a thought of all those miners who have never been rescued, particularly in China and African mine collapses where nothing can be done. But here in Thailand was an outstanding achievement in the face of adverse odds. My knowledge of the story is very limited but I contemplate about the calming role of the soccer coach/priest who apparently worked the group upstream to a safe chamber by understanding some of the nature of the lower flooding passages, and may have had a calming influence on the boys while waiting in the dark. The loss of a retired Thai Navy diver was tragic but in some ways illustrates the huge difference between Services diving and recovery on the one hand and, on the other, advanced cave diving in confined, remote silty spaces. Indeed, the world also learned on their TV screens about cave divers, their high skill level, their understanding of their particular environments and their determination to work exceptionally hard and eventually succeed. Cave diving has elevated since the early days 50 years ago when it was seen as a suicide sport – the world has witnessed the skill and high-level training in this dedicated sport/science. CEGSA are proud of all the divers and particularly our Harry and Craig and wish them a quiet time following the rightly-deserved public awards they received in Canberra with Craig. Some time when you both are ready, Gentlemen, we would love to have a quiet beer with you around a BBQ to simply say **"Thank You"**.

Ian D Lewis

President, CEGSA

TRIP REPORTS

Flinders Ranges 9-10 June 2018

Members of the Scout Caving Group headed to the Flinders Ranges on a chilly weekend in June, with the plan to visit Mairs and Clara St Dora Caves with small group of Venturers. The journey started on Friday night with the long drive from Adelaide to the Bagalowie Homestead.

On leaving the highway at Carrieton, the road was thick with kangaroos - hundreds of them. I suspect if we'd shone a spotlight over the nearby fields we would have spotted many hundreds more. We arrived at the homestead around midnight, set up camp and tried to get a good sleep before the day ahead.

Saturdays plan was to visit Mairs Cave, so after a quick breakfast we headed up the creek to the entrance, which is located partway up a large limestone ridge. Having a few new leaders with us this weekend, we took some time to allow them to rig the cave, which turned into a short rigging workshop. The pitch is a relatively easy one to setup, with several excellent anchor points aligned with the large gate that protects the cave.



The abseil into Mairs Cave

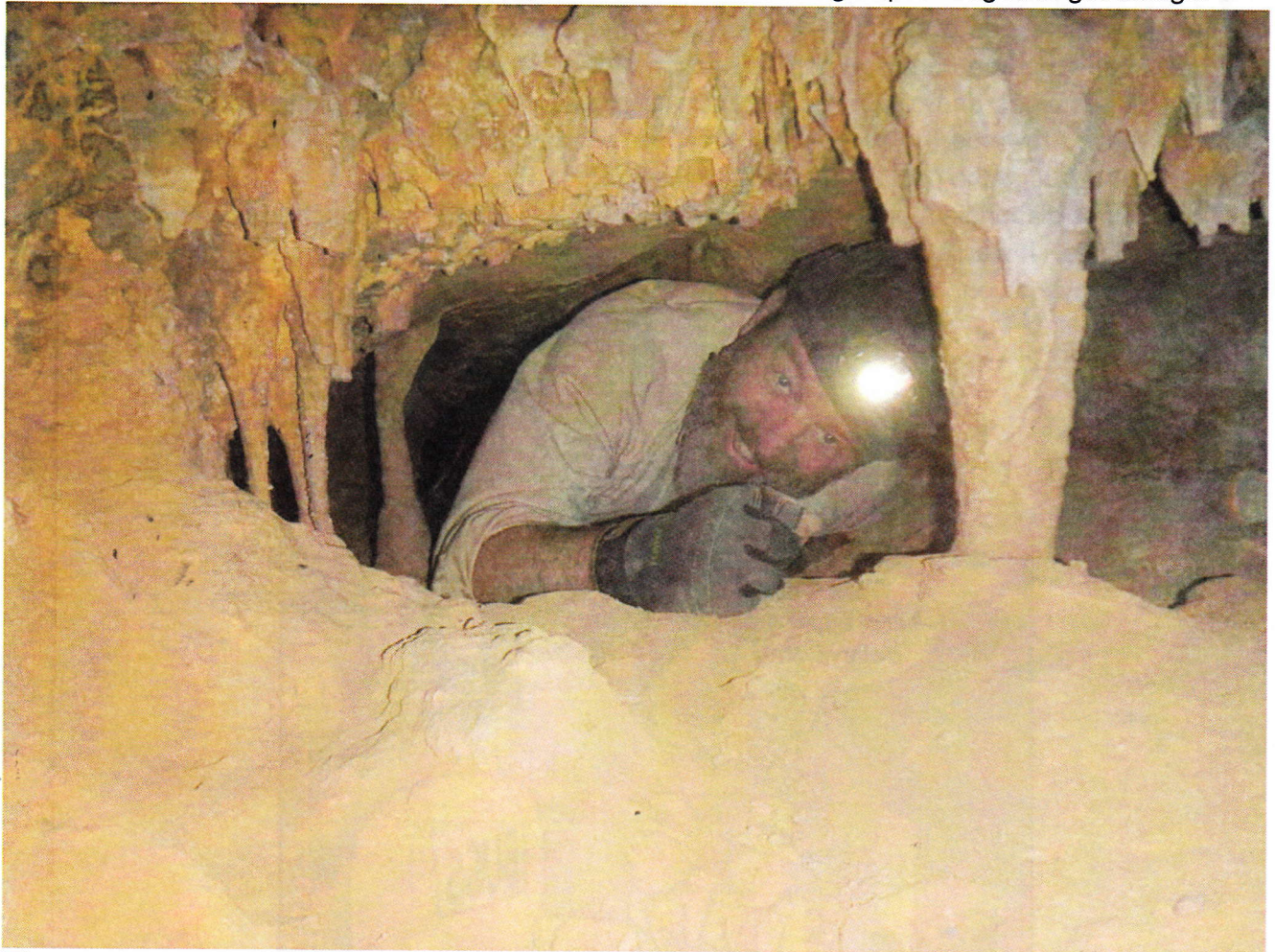
Once past the gate, the entrance pitch is approximately 17m in length, and the cave can be rigged with both an abseil though the large gate, and a belay for the fixed ladder in a smaller gate. The abseil is mostly free hanging, and has a nice step at the top which makes it a little easier for nervous first timers.



Cave coral and other speleothems in Mairs Cave

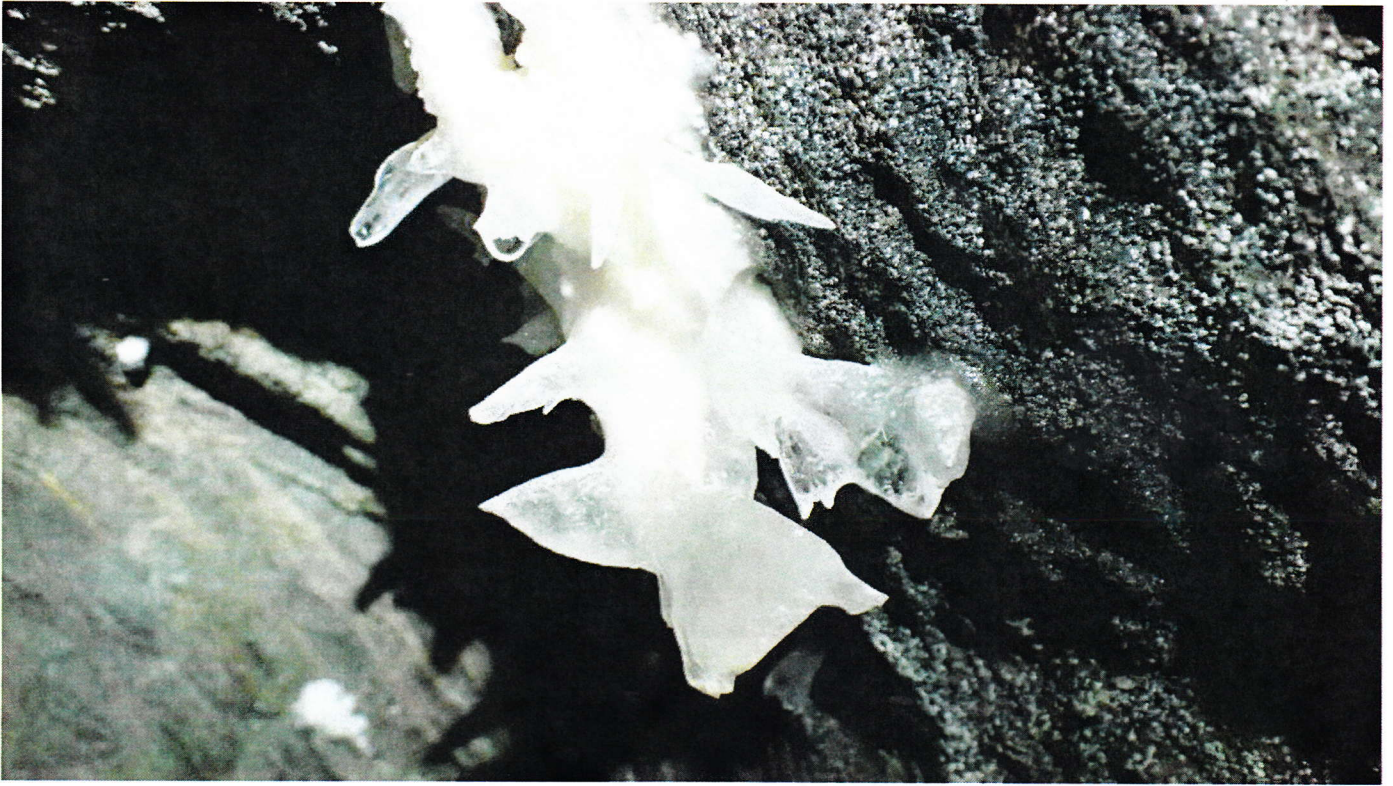
After entering the cave, the first session in the cave was spent making our way towards the “end” of the cave. The plan was to find our way to the beginning of the coral floor and look longingly (but not entering) the christmas tree area. Along the way we saw many beautiful decorations, including some needle like helictites and much cave coral type formations, as well as more traditional speleothems. The passages winding to the end of the cave are also quite interesting, as the weave up a down though the cave, making for some interesting climbing through some very round shaped holes.

On returning to the entrance chamber, some elected to exit the cave for a quick comfort stop, as well as lunch. That afternoon just over half of the group set off to pass through the infamous 8 ¼ inch squeeze. Despite their best attempts, only a small number of this group managed to get through.



The author making his way towards the entrance of the 8 ¼ inch squeeze (he didn't make it through!)

We exited the cave just as the sun set, and then headed back to camp for a night of pasta, campfires and marshmallows!



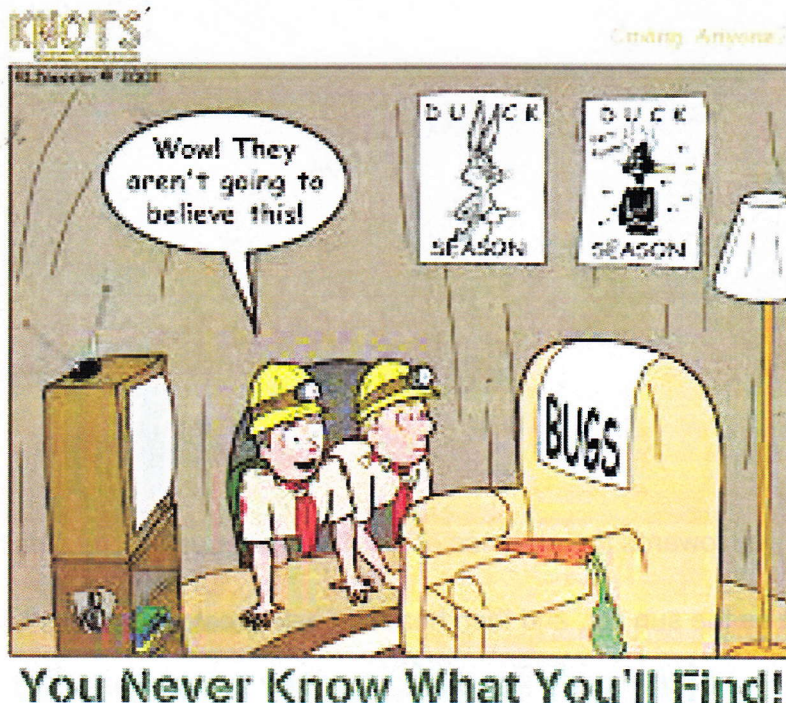
Crystal formations in Mairs Cave

The next morning we awoke ready to visit the nearby Clara St Dora Cave. Entry to the cave is via an adit carved into the side of the hill. It meets a dry section of the cave, in which we are greeted two very dried out kangaroo carcasses. This section of the cave is somewhat maze like, and features many small passages and climbs for all levels of ability. After we'd exhausted that section of the cave, we moved towards the inner gate to access the protected section. Sadly none of the keys provided would budge the padlock attached to the gate.

After that minor disappointment, we made our way back to camp, had lunch and then hit the road back to Adelaide. It was a great weekend, the caves in the Flinders Ranges being some of the best in the state in my opinion.

Matt Smith.

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Past Trips from General Meetings

May 2018

- Scout Caving Group visit to Naracoorte Caves - Wet, Blackberry, Little Vic, Appledore & S102. **Mark Corbett** reported that there was some potential dig sites in one of the large rockpiles inside S102.
- **Ian Lewis** visited Naracoorte Caves with a group of university students, mapping Wet Cave in great detail.

June 2018

- Matt Smith, Mark Corbett and Michael Woodward with the Scout Caving Group visited Mairs & Clara St Dora Caves in the Flinders Ranges. Mark Corbett reported that there seemed to be more graffiti in Mairs Cave than previously. Various methods of mitigating this were discussed. There was some discussion as to who uses the cave, and whether keeping the key onsite is a good idea. It is believed that some school and church groups, and possibly outdoor education groups use the cave. Also noted that the padlock on the Clara St Dora gate could not be opened with the key.
- **Neville Skinner, Frank Hankinson and Grant Gartrell** visited Warraweena over the June Long Weekend. They were unable to find the cave, however were able to spend some time with the land owner, reporting that they were happy for cavers to explore on their property.
- **Stan Flavel** visited the Eyre Peninsula, visiting a park 20km SW of Kimba which had Granite Caves
- **Krunchy and Janine Kraehenbuehl** visited Mexico recently, diving in the Dos Ojos System.

July 2018

Minutes not available

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TECHNICAL and OTHER ARTICLES

MEMBERSHIP FEES

CEGSA MEMBERSHIP FEES FOR 2018 YEAR

Full Membership	\$ 45.00
Full Country Membership	39.00
Associate Membership	37.00
Long Term Associate	45.00
3 Month Introductory	5.00
Joining Fee (N/A to 3mth Intro)	12.00
Discount for Country Membership	6.00
Print Form CEGSA News	25.00

ASF LEVY FEE FOR 2018 YEAR

Single	\$ 68.00
Family	119.00
3 Month Introductory	20.00
Journal Subscription	25.00

2018 YEAR FEES

	CEGSA	+ASF	TOTAL
Full Membership	\$45.00	\$ 68.00	\$113.00
Full Country Membership	39.00	68.00	107.00
Associate Membership	37.00	68.00	105.00
3 Month Introductory	5.00	20.00	25.00

Variation for Family Membership

1 st Full Member + 2 nd Full Member	\$90.00	\$119.00	\$209.00
1 st Full Member + 2 nd Associate Member	\$82.00	\$119.00	\$201.00
1 st Assoc Member + 2 nd Assoc Member	\$74.00	\$119.00	\$193.00

Discount for Country Membership applies for Family Memberships.

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

Membership Fees can be paid direct into CEGSA Account BSB 105-900 Account No 950661040 and reference with your Name, CEGSA Fees or Membership Number.

Graham Pilkington. Membership Officer.

Approved CEGSA Trip Leaders

Name	Caving Leader level
Stan Flavel	Horizontal and Laddering
Grant Gartrell	Co-ordinator
Paul Harper	Horizontal and Laddering
Richard Harris	Horizontal
Peter Horne	Horizontal and Laddering
Peter Kraehenbuehl	Horizontal, Laddering and Vertical
Ian Lewis	Horizontal and Laddering
George MacLucas	Horizontal, Laddering and Vertical
June MacLucas	Horizontal
Steve Milner	Horizontal, Laddering and Vertical
Tim Payne	Horizontal, Laddering and Vertical
Graham Pilkington	Horizontal and Laddering
Eddie Rubessa	Horizontal and Laddering
Mark Sefton	Horizontal and Laddering
Neville Skinner	Horizontal, Laddering and Vertical
Matt Smith	Horizontal and Laddering
Michael Woodward	Horizontal, Laddering and Vertical

All the above named are also CEGSA Trip Coordinators.

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. Trip Leaders are expected to maintain their First Aid training.

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Naracoorte children take the reins on new Caves Nature Playground

Text and photo: Amy Maynard, Naracoorte Herald (Aug 7 2018)



STEM ambassadors from the Naracoorte Primary School and Naracoorte South Primary School have taken the initiative to lead a unique project taking shape in our community – the Naracoorte Caves Nature Playground.

The budding project heads are overseeing a challenging consultation process designed to create ideas for the nature playground. The goal of the STEM team is to give all of the primary and kindergarten students in Naracoorte the chance to have their say on the new playground's design.

The students have been tasked with incorporating the science of fossils,

mathematics, data collecting and analysis, design of their own playgrounds and technology to communicate via online platforms Google Classroom and Maker's Empire.

Each school is running an internal design competition where each class is able to brainstorm and come up with ideas and draw their own interpretations of what the playground should look like based on the provided guidelines. These ideas have been discussed with the two kindergartens to gain further insight, and eventually a winning design will be chosen by the STEM team to present to the caves project managers and the community team behind the Fund My Neighbourhood grant.

The ambassadors have visited the caves and Wonambi Centre to view the proposed sites for the playground. They will then choose one design element from each school to create their own digital representation and 3D printed model to present to the caves project team and community group.

These concept designs will then be discussed with the winning playground designer for further assessment.

The Limestone Ladies CWA group, which pitched the idea to the community, were steadfast that the consultation should include local children in the community. "We wanted the children to contribute to the project and have a sense of ownership over it," team member Katie Dawkins said. "We really want the community to get behind the project and make this something we can all be proud of and contribute to." Ms Dawkins said the group would also welcome contact from anyone in a position to donate redgum wood for the project or, as the project progresses, assist in other ways.

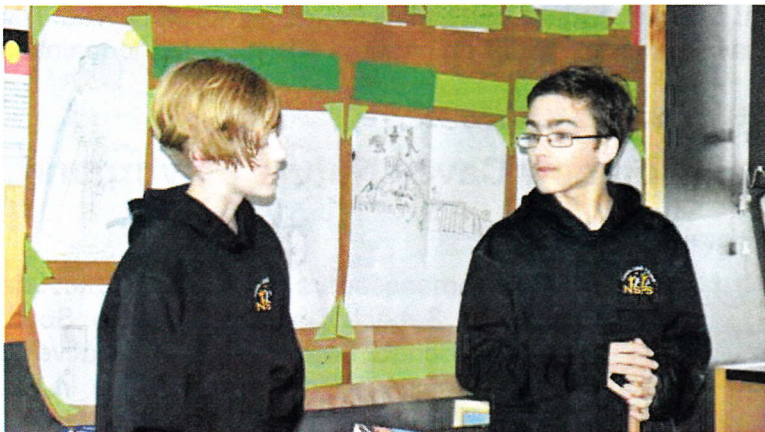
Naracoorte Caves Site Manager Nick McIntyre said the playground will be themed around fossil hunters. "It will tie in with the existing caves educational programs and the world heritage aspects of the site which consists of rare fossil deposits," Mr McIntyre said. The playground will add another dimension to the learning experience available at the popular tourist destination. The Naracoorte Caves National Park is South Australia's only World Heritage-listed site, attracting about 55,000 visitors a year.

Mr McIntyre said the playground would encourage people to increase the length of their visit, both at the caves site and in the region, creating further opportunities for other regional businesses to benefit.

For further information, contact Nick McIntyre, Caves Manager.

Kids get clever about the Caves Nature Playground!

Text and photo Amy Maynard, Naracoorte Herald. (Aug 16 2018)



The Naracoorte Caves Nature Playground is getting closer to completion thanks to the design and technology skills of Naracoorte Primary and Naracoorte South Primary's STEM Ambassadors.

The Ambassadors presented weeks' worth of research and designs yesterday in the Naracoorte South Primary school, leaving the invited guests and family and friends suitably impressed.

The first school to present their findings and subsequent models were Naracoorte South Primary. They explained how they had surveyed their fellow students and kids at the kindy to find out what they would want from a playground. The most requested features were a slide, climbing equipment (ladders, rock walls, etc.) and a cubby.

The main presentation of the model replica was conducted by Zach Pope and William Patrick, who took the audience through every element of the design, including the equipment made in the likeness of a Diprotodon and Wonambi. "Kids can take photos like, I'm on a wombat!" Zach said of the Diprotodon. "That would be pretty cool."

Will and Zach took turns pointing at the surveys and models, and assured the audience, "There are not to scale – they are models on a sheet."

Next up was Naracoorte Primary School, who also unveiled impressive stats and designs.

Naracoorte Primary School's team found out that slides and climbing equipment were popular with their respondents, as were a cubby house and sandpit. They incorporated these elements into their design with fossils buried in a sandpit, and an "underground egg" – a cubby house designed to be half above ground, half underground.

Naracoorte Primary School also demonstrated how they'd made the virtual design through a program called Maker's Empire. "It got destroyed a few times," Lucas Bald said casually as the crowd surveyed the digital playground.

Once the students had finished their presentations, Acting Director of the Naracoorte Caves, Nick McIntyre, said a few words. He thanked the CWA Limestone Ladies group for involving the students, stating that the decision meant the eventual playground had "a nice community feel to it".

He then spoke with the students about the next stage, which will involve sending out tenders to designers to build a playground within budget. "It won't be exactly as you see here, but within the mind of the designer, the priorities have been identified," he told the STEM Ambassadors.

Staff from Naracoorte South Primary and Naracoorte Primary praised the Ambassadors for their hard work, and Geraldine Mathieson also congratulated the students for incorporating the ideas and views of younger children. "To both schools, thank you," Gerry said. "It's helped the kindy kids feel very empowered, and they had a lot of fun."

For helping to supervise the project, Ange Donnelly and Kym Shepherd from the Naracoorte South Primary School were given a round of applause.

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Top honour for Dr Reed, our resident paleontologist.

Text and photo Amy Maynard, Naracoorte Herald. (Aug 16 2018)

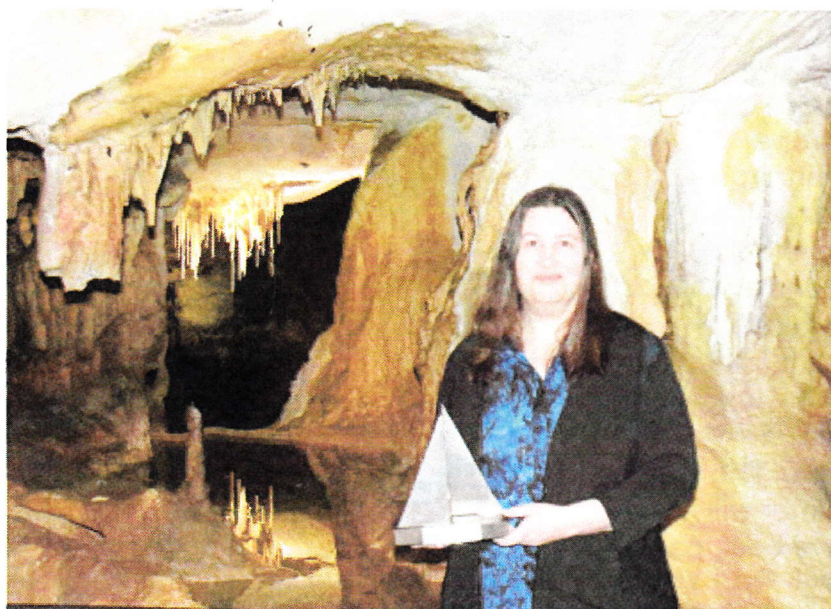
Dr Liz Reed, who has spent the last 20 years championing the Naracoorte Caves, has won the Unsung Hero of SA – Science Communications category at the SA Science Excellence Awards.

"It requires a substantial commitment," Dr Reed said of the work which led to her receiving the award last weekend. "But the importance of the Naracoorte Caves cannot be understated."

Dr Reed first visited the Caves when she was an undergraduate student in 1995. As she described it, "I went into the Victoria Cave as a student, and I came out as a paleontologist." Dr Reed returned to the Caves during her PhD, which began in 1998. She would regularly visit the various caves, using them as a field site. She was also sometimes employed to give guided tours since then, a job she enjoyed.

Since then, her career in science communication has gone to great heights. "I've spoken with CNN, National Geographic, various TV and radio shows, and delivered talks at conferences," Dr Reed said. Dr Reed is also at the forefront of educational information about the Caves, speaking with various kindies and schools. "I take great pride in promoting the World Heritage site," Dr Reed stated about her profession. "It's globally significant – a unique window into biodiversity and climate. "If I can communicate how significant the Caves are, I would have done my job."

Dr Reed is a paleontologist, and is at the forefront of an ARC (Australian Research Council) funded project which explores ancient flora and fauna that has been fossilised in the Caves. Dr Reed has been a prominent spokesperson for the project, but she's also thankful for all of the support that the project has received. "The Naracoorte Lucindale Council, the Wrattonbully Wine Region, the University of Adelaide, the South Australian Museum, they've all been amazing."



Liz would also like to thank the staff at the Naracoorte Caves, and her partner, Steve. "Steve has been with me since the beginning, and has also been involved in the Caves over the years. "I may have got the award, but a lot of people are a part of it."

But the best reward for Dr Reed is seeing the next generation of scientists working out at the Caves.

"I'm glad that the future is bright, and that a wave of young scientists will continue to work at the Caves after I'm gone. That's the great thing I'll have achieved."

Dr. Liz Reed with her award.

Photo: Amy Maynard.

WHICH BAG IS THE BEST TO TAKE CAVING?

Caving bags, AKA dogs, ya bastard and many other expletives, get everything thrown in them and at them. They are dragged, rolled, kicked, sometimes thrown, taken for swims in underground rivers, get covered in mud, clay, sand and get hauled over sharp rocks. But they carry your lifeline to safety, your precious bottle of Moët err... Rather, the gear needed for the caving you are doing: SRT gear, warm clothes, Port, first aid kit, rope, spare lights and batteries, piece of mono-cellular foam rubber, lunch and chocolate. Thus, with all this in it you are going to need something with a bit of size to it.



The Aldi special.

between \$2.00-\$10.00, the Aldi waterproof single shoulder strap daypack, about \$20.00 or the Aspiring Cavepack.

The K-Mart or Op shop cheapie.

If you buy one of these, you may need to make some modifications. Cut off all the crap that is on the outside that will get caught on stuff. This will leave you with the shoulder straps, an outside pocket that zips up, and a handle or loop at the top so you can pass it on to people or place a karabiner on which to tie a rope.

Any outside pockets made of mesh type material, which in the bag's non-cave-life held such items as drink bottles, should be cut off. In the cave environment anything in them will undoubtedly fall out, hit any below caver or perhaps as it falls break the straws that you have just meticulously negotiated your way around trying not to damage them. The latter is never a good look. The former will forgive you after suitable bribes have been paid.

Sometimes these bags are water-proof, but I wouldn't stake my life on it. Lifespan of such a bag depends on how you treat it, the way in which it is made and from what material. These bags can be glued and/or stitched together, made of nylon with a PVC coating that usually flakes or is scraped off during use. They are cheap, practical and good for non-rope work trips where space can be at a premium.

Further, the in-cave pack should be foldable so it can be packed away. This is useful if you are going to be hauling 20kg of ropes, rigging gear and all the just-mentioned items up and down ruddy great hills, through blackberries or the impenetrable biomass known as the Tasmanian forest. For this fun game your bushwalking backpack is recommended as it has a comfortable harness, something caving packs don't have. If your caving pack rolls/folds up you can stuff it, along with all the rest of the gear into the bushwalking pack and then hand the lot to some passing mule or truck or innocent caver.

So here are some choices: The Kmart or the Op shop cheapie priced somewhere



The Kmart Special.

The AldiSpecial

I have not much experience with this pack, except to note my bias against single shoulder strap type packs. I simply find them uncomfortable to wear. Having got that out of the way, many cavers use them. They are relatively cheap, around the \$20.00 mark, seams are heat sealed, and the PVC is a reasonably heavy weight, but not as heavy as that used in the Aspiring bags. Like most day packs they are narrow and thus can fit through things easily. As for space to carry all your stuff, well ... these cope OK. Buying them is the issue as Aldi seems only to stock them when the moon rises in the west.

Aspiring Cave Bags

These come from Aspiring Equipment in NZ. They are made specifically with caving as the primary use. They come in a couple of sizes, 35 litres and 15 litres.

The specifications blurb on their website states the construction details as follows:

- 680 g/m2 white PVC with colour contrast
- Butynol base reinforced with webbing
- Reinforced eyelets in the base for drainage
- Double loop daisy chain hauling straps
- Heavy-duty enclosed draw cords for closing the pack
- Double closure provides for pack extension
- Simple adjustable shoulder straps
- Supplied with a high-density 10 mm foam pad
- Available in Red, Yellow, Blue or Dark Green contrast trim

The shoulder straps are made from seatbelt tape and some women find that they are set too far apart for a woman's build. This causes the straps to sit on the edge of the shoulders and not comfortably in the centre.

They are however well made, very durable and can take the beating cavers put them through.

They have no zippers that, over time, clog up with grit, break apart, thus becoming useless. They have good grab points and the designers have thought about where to place them, putting them on the same side as the shoulder straps so you can grab the bag with all the snaggy bits on that side. You can get them direct from Aspiring Equipment in NZ, if you spend more than \$100.00 postage is free.

What do I use? Well, I have this old daypack, it's about 16 years old, which I got on special from a Kathmandu store. From memory, it cost me \$15.00 at the time. It has been on every caving trip since, about 12 per year, many of which are ten-day affairs. It has been dragged

through airports as a functioning day pack, hauled around caves in Europe, and back home to most caving areas in the country. I have been trying to put it out of its misery for the past couple of years, but it just doesn't want to die. What do I like about it? The shoulder straps are padded, it has a compartment which contains a piece of mono or high density foam rubber, which I can take out and sit on. This



Above: Aspiring Caving Bag
Below: Bottom of Aspiring Bag

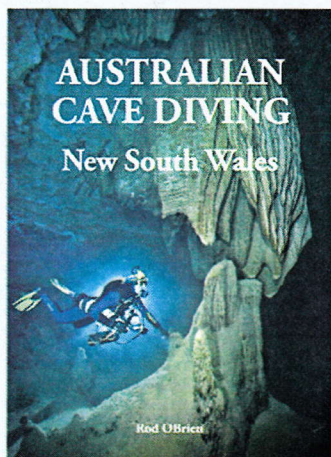


keeps the cold at bay and saves my skinny arse from the discomfort that comes from sitting on lumpy rocks. It fits all my gear, folds up and now has the odd drainage hole in the bottom to let the water out! Importantly it is a straight sack, so the top of it is not curved and closed with a zip. It is closed with a draw string.

I will let you know when I bury it and have to buy another. In the meantime enjoy hunting for a cave bag.

Clare Buswell (reprinted from FUSSI Newsletter Vol30 No2 2018)

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AUSTRALIAN CAVE DIVING: New South Wales

By Rod O'Brien

Published August 2018, Paperback

This 288 page book describes cave diving and its history in New South Wales, Australia. It is full colour throughout with 254 photos including 58 historical photos from the 1950s, and 51 maps. Chapters include Cave Diver Training, Cave Diving Equipment and detailed descriptions of cave diving at 15 caving areas in New South Wales.

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New Cave Diving Book Review:

AUSTRALIAN CAVE DIVING – New South Wales

Rod O'Brien

Published Sydney August 2018

The high-profile focus of cave diving in Australia is on Mount Gambier and the Nullarbor Plain. Cave diving first started in Mount Gambier in 1961 and on the Nullarbor in 1972. The CDAA formed in 1975 but the 5,000 CDAA members over 4 decades may not realise that Australian cave diving began in an eastern State 20 years before and only 7 years after World War 2 ended. Brave, energetic, innovative and well-organised divers in Sydney were drawn to the popular underground river featured in the famous Jenolan Caves in the Blue Mountains of New South Wales, three hours from Sydney.

We all know that limestone is the main rock in which caves form. Most of the world's limestone formed on sea floors which have become exposed as landscapes after being uplifted. Where the limestone is flat and full of fossils, groundwater has dissolved our horizontal tunnels, sinkholes and massive passages – fantastic cave diver territory in Mount Gambier, the Nullarbor, Mount Gambier, Florida, the Bahamas and the Yucatan in Mexico. However, when limestone gets squashed, squeezed and hoisted into mountain chains, it becomes much harder and riddled with fractures. Caves formed in marble, dolomite and hardened limestones are carved by streamways through the fractures which bring gravels, sands and muds through the systems. Most of the world's cave diving in Britain, Europe, Russia, North America and New Zealand are in these conditions. Here in Australia

they are found in cave systems throughout the hills and mountains of the Great Dividing Range of eastern Australia and Tasmania. Rod's book is about the extensive diving in these conditions throughout the NSW section of the Great Divide. It's all about a 'parallel world' to our world of large white-rock sinkholes and huge clear passageways.

Rod is one of Australia's leading cave divers and has poured all his experience and knowledge into a simply *huge* effort over the last 7 years to produce this book about the beginnings of cave diving in Australia. It started in the famous Jenolan Caves where the two underground river systems flow from the south and the north into the multi-level-cave tourist complex, forming a series of sumps and concealing hidden chambers within the mountainsides. A combination of cave explorers and cave divers have been trying to reveal secrets of the Jenolan Limestone for 7 decades now and Rod documents in full all those explorations, through the development of gear improvement and cave diving techniques. On page 45 he lists a number of important 'firsts' in cave diving in this country. New South Wales cave divers have much tougher and muddier current conditions to traverse and dive compared to the clearwater sinkholes and caves of South and Western Australia. That's why they made the excellent and appropriate decision to undertake UK Sump Diver Training with Rob Palmer in 1993 and 1995 rather than try to adapt the CDAA system which is better designed for sinkhole and stillwater territory.

Rod is a specialist in several areas – working for years as a commercial diver, a wreck diving specialist, helping discover advanced caves like the Olwolgin and Burnabbie systems on the Nullarbor and receiving an 'Award of Distinction for Exploration' from the Australian Speleological Federation (ASF). His diving life has been an adventure in itself and there is another book to be written about all that some day! I am quite comfortable to say that Rod's experience in cave diving efforts and achievements stand alongside those of Ron Allium who figures prominently in NSW cave diving history too and the contribution of both of them to Australian cave diving has been outstanding. They have shared much of their NSW work with prominent Sydney University Speleological Society (SUSS) cave divers Keir Vaughan-Taylor, Simon McCartney and Greg Ryan.

This is a very well-written, readable book with an attractive, professional layout, clear subheadings, lots of excellent color photographs of beautiful places and tough exploration and many good yarns and reports about the efforts of more than 100 cave divers in NSW caves over the time. Rod is generous and thorough about crediting and attributing the achievements of others with many trip descriptions and personnel, and listed all cave divers who've helped in NSW at the back of the book with thorough references and a detailed index, features essential to any quality book. His crediting of assistance lists many prominent members of the ASF fraternity in SUSS, SSS and CDAA who have all contributed to the book but it is Rod himself who has pulled all this information together expertly. Rod covers the changes in techniques utilised for NSW cave diving and has included a special chapter on foul air detection and management, as NSW cave mountain caves have vegetation and soil inwash from stream systems that can decay and trap CO₂ in airbells and pockets – not a problem in any SA and WA cave diving except for the Tommy Graham's Inner Sanctum Chamber.

But it is his detailed coverage of Australia's cave diving pioneers commencing in 1952 in Jenolan with a series of well-publicised Sydney newspaper articles that is an outstanding contribution to our sport and our science. Rod has obtained many excellent and comprehensive black-and-white photographs of those who were tackling this tricky exploration a full 10 years before the first divers even jumped into the first Mt Gambier sinkholes and 20 years before the CDAA formed and the first Nullarbor caves were dived. This is **real national cave diving history** and excellent for all CDAA and current cave divers in this country to learn about and acknowledge resourceful and courageous pioneering when dive lights were motorcycle batteries in sealed World War 2 ammo boxes. Rod describes all sorts of early equipment and modifications in a sequence so we can really appreciate how our forebears were able to innovate in their drive to discover underwater caves. He backs this with a simply great montage of photos of these divers and on-site support parties on pages 116-121. The leader of the original Jenolan cave dives was Dr Denis Burke who I met and caved with years later when he and his caving family moved to South Australia and joined CEGSA. His other prominent Jenolan partner was Ben Nurse who later led the SSS (Sydney Speleological Society) for many decades.

Rod provides full coverage throughout NSW caves with a great chapter and photos on the beautiful Wellington cave diving and photos and the exploration of drowned caves at Burrinjuk Dam. CDAA

members will recognise a number of CDAA names involved with these areas working alongside NSW cave diving specialists in these explorations eg Ken Smith pinging, JDZ in the mud, Neil Vincent's many photos, Ronnie Allum *everywhere* in NSW (of course!), Peter Rogers, Phil Prust, our Agnes Milowka, and even yours truly's Ice Pick Lake story. The book then covers Cooleman Plains and Yarrangobilly cave dives in the Snowy Mountains (where there's also interesting low-viz freshwater diving on the drowned towns in Lakes Jindabyne and Adaminaby), sumps at the base of the vertical shafts of the Bungonia Caves Gorge caves, even the pool at the bottom of Wyanbene Big Hole, a 100m drop to water three times the drop to water in Hells Hole at Mt Gambier.

I love maps from the early days when we mapped the sinkholes to help in dive planning at Mt Gambier. Rod's book contains many maps of all styles, some from trip reports and sketches, but it also has several excellent detailed long sections of the complex Jenolan system showing tourist caves, other dry caves up the mountainside and the underwater sections and their connections (pp's 48, 78-9, 98-9, 124-5) which show their relationship and complexity. Some maps contain eye-catching and witty names of various chambers and extensions – part of the speleology culture around the world. One sketch of a tight passage on p65 shows the grovel challenge - spot the diver! The Mammoth Cave Lower River (Slug Lake) dive is NSW's greatest challenge – it's now 96m deep (text p 66) and opening out below the chamber sketched on p65. In a geological paper I gave there a couple of years ago, my estimation is that the near-vertical limestone plunges several kilometres deep at Jenolan and this 94m underwater chamber is the top of a large deep 'reservoir' of groundwater feeding the northern river system. Rod Obrien and Ron Allum have both done this epic dive. Cave dives in NSW require good fitness, tough equipment, tough discipline and close cooperation with that State's cave divers compared to our calmwater experiences. We have much to learn from them. Rod's book is a brilliant effort and deserves success and great respect. Its collection of history and activity underpins nearly 70 years of cave diving in this nation. Outstanding!

And one PS: Can anyone find the photo of several of us kneeling in the underground Imperial River streamway at Jenolan in front of a party of cave tourists where we are holding up handfuls of pennies, shillings and florins thrown in there over 100 years of public visitation!? Real treasure on a cave dive!

Ian D Lewis, Life Member of CEGSA (#6701) and CDAA (#258)

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NOTICE OF MOTION

Due to unforeseen circumstances this motion was not presented at the April GM as advertised so will now be presented at the September GM.

Motion to be voted on at the 26th September 2018 General Meeting to change **RULES 1(h)**

"All members pay an Australian Speleological Federation levy appropriate to their membership status."

By adding

"The levy collected is held in trust by CEGSA for the payment of their ASF membership subscription. These monies do not form part of the Groups' income or expenditure and belong to the ASF."

Graham Pilkington.

UPCOMING EVENT

Sunday 30th December 2018 – Friday 4th January 2019

31st ASF Conference

Devonport, Tasmania



Discover
The Darkness
Beneath
this summer at the
31st Australian
Speleological
Federation
conference.



Like us on Facebook and check out our website:
www.asfconference2019.com
Enquiries: asftasmania2019@gmail.com

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FUSSI PROGRAMME July 2018- January 2019

Note: FUSSI holds a general get together/meeting on the Third Thursday of each month except where notified. Programme subject to change.

July 2-23 Mid-Year Break,
Winter Solstice, bonfires, book burnings, much drinking etc.

July 19 th	7pm	Film Night. "Descent" Venue to Be Confirmed. Dee Coordinating
Aug 11/12		Naracoorte Trip. A trip for everyone. RSVP 16 th July 12 Noon. Don't miss out put your name down, Clare Coordinating. Contact: fussi@fussi.org.au
Aug 16 th	6.30pm.	Search, Rescue, & Comms Seminar. Noel Stockdale Rm, Flinders Uni Library.
Sept 8-9 th .		Real time rescue. Yorke Peninsula. FUSSI Exec Coordinating. Camping overnight on the Saturday.

MID SEMESTER BREAK

17 Sept - 1 Oct.

Sept 20 th		Library and pizza night. At the club store. On Campus, under the Union Hub. Immi Coordinating.
Sept 29-Oct 1 st		Volcanic Caves of Western Victoria Thomas Coordinating.
Oct 18 th Thurs	6.30 pm	Navigating in the Forest (of Uni) Deans Compass and paper map only!
Oct 21 st Sunday.		Walking the Sellicks Hills. Clare Coordinating.

Exams 3 Nov -17 Nov, Much Gloom Descends!

End of year break
18 Nov -25 Feb 2019

Nov 22 Thurs	6.30pm	Post exam snakes and ladders. Pine forest session
30 Dec- Jan 6 th		<i>Australian Speleological Federation Conference Tassie.</i>
Jan 27 th Sunday	11am-6pm	New Year's gathering, FUSSI T-Shirt making Discussion of world take over plans etc,

CALENDAR OF EVENTS

Date	Type of Event	Description	Contact
22/08/18	General Meeting	Royal Society Room, SA Museum, Adel. Mars Caves and Geology	Dr. Victor Gostin
??/09/18	Committee Meeting	TBA	Ian Lewis
26/09/18	General Meeting	Royal Society Room, SA Museum, Adel. TBA	Ian Lewis
29/09- 1/10/18	Labour Day W/E		
??/10/18	Committee Meeting	TBA	Ian Lewis
24/10/18	General Meeting	Royal Society Room, SA Museum, Adel. TBA	Ian Lewis
??/11/18	Committee Meeting	TBA	Ian Lewis
21/11/18	CEGSA NEWS	Articles due	Athol Jackson
28/11/18	General Meeting	Royal Society Room, SA Museum, Adel. End of Year BBQ	Ian Lewis
??/12/18	Committee Meeting	TBA	Ian Lewis
26/12/18	No General Meeting	No General Meeting	
		Xmas / New Year Trips	
	Caving	Continuing Fleurieu Peninsula Exploration	Grant Gartrell

****Extra trips will be notified in the Calendar on the Website or at General Meetings****

To be covered by insurance it is mandatory that caving trips involving club members must be registered as CEGSA Trips. To do this, the nature and timing of the trip must be entered in the Calendar of events in CEGSA NEWS, minuted at a General Meeting of Members or entered in the Website Calendar. 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 to the Records Officer and editor in a timely manner.

Notes