

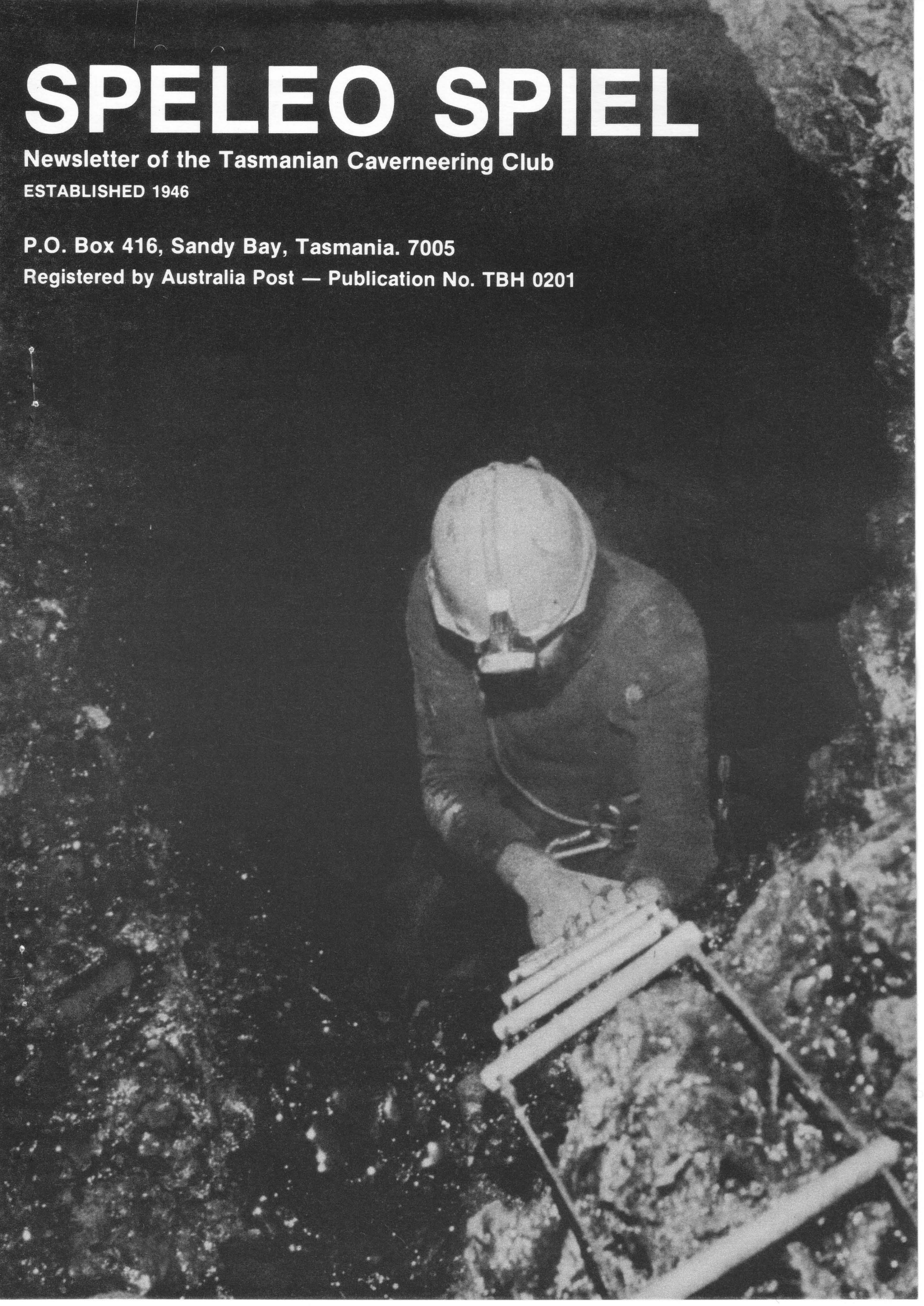
# SPELEO SPIEL

Newsletter of the Tasmanian Caverneering Club

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# **SPELEO SPIEL... ISSUE # 284**

## **NEWSLETTER OF THE TASMANIAN CAVENEERING CLUB INC**

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**\* \* \* FORWARD PROGRAM \* \* \***

<i>Ida Bay Karst Management Plan Meeting...</i>	25 & 26 February
<i>Cave SAREX '95...</i>	11 & 12 March
<i>TCC AGM...</i>	30th March

**\* \* \* FROM THE EDITORS DESK... \* \* \***

My apologies if the Spiel seems a bit disjointed - Tanya and I have just bought a house way up in the backwaters and I've been on holidays for a few weeks so the Spiel has been put off, sort of... Anyway, with some vital things coming up in the not too distant future, and knowing that people may wish to have some advance notice SO THEY CAN KEEP THESE DATES FREE, the following articles have been thrown together to form Spiel # 283. Sorry to anyone who has submitted articles that have not been included in this issue (ie: Stu), I promise they will be in the next one; sorry !

PS - Stu: I've misplaced your disk, thus temporary article absence.

***General Happenings:*****International Bits of Stuff:**

*New 1km + Deep Caves...* Croatian Cavers pushed the "Lukina Jama" pothole to a depth of 1,355 metres in August 1993, making it the 11th deepest cave in the world. This cave lies at an altitude of 1,436 meters, and has ice covering the walls for the first 300m !

In the same year, Slovenian cavers explored "Vandima" to a depth of 1,042 meters.

... *International Caver # 8*

*Fisher Ridge Cave, Kentucky, USA...* This cave lies in the same area as the "Mammoth Cave" system which is now over 530km long. "Fisher Ridge Cave" is growing rapidly and has been surveyed to over 115km long. It is coming close to both the "Mammoth" system to the west and "Vinegar Ridge Cave" to the north.

... *Descent # 117*

!! SAREX '95 : 11th & 12th MARCH !!

*Longest and Deepest Caves, 1993...*

## Longest:

1.	Mammoth Cave	USA	531 km
2.	Optimisticheskaja	Ukraine	183 km
3.	Holloch	Switzerland	156 km
4.	Jewel Cave	USA	145 km
5.	Siebenhengste-Hohlensystem	Switzerland	126 km
6.	Fisher Ridge Cave	USA	115 km
7.	Wind Cave	USA	113 km
8.	Ozernaja	Ukraine	111 km
9.	Lechuguilla	USA	106 km
10.	Gua Air Jernih	Malaysia	102 km

## Deepest:

1.	Reseau Jean-Bernard	France	1,602 m
2.	Gouffre Mirolida	France	1,520 m
3.	Vjacheslava Pantjukhina	Georgia	1,508 m
4.	Lamprechtsofen	Austria	1,483 m
5.	Sistema de la Trave	Spain	1,441 m
6.	Boj-Bulok	Uzbekistan	1,415 m
7.	Illaminako Ateeneko Leizca	Spain	1,408 m
8.	Sistema Cheve	Mexico	1,386 m
9.	Sneznaia-Mezennogo	Georgia	1,370 m
10.	Ceki-2	Slovenia	1,370 m

... International Caver # 8

Thanks to Stu and *Nargun Vol. 27, # 2 (August 1994)* for these bits of info.

**A Blast From The Past:**

"Limestone is a rock almost entirely composed of carbonate of lime. It occurs in most parts of the world, covering sometimes tracts of hundreds of thousands of square miles...

The abundance of this rock affords ample opportunity for the display of the solvent action of subterranean water. Trickling down the vertical joints and along the planes between to limestone beds, the water dissolves and removes the stone, until in the course of centuries these passages are gradually enlarged into clefts, tunnels, and caverns. The ground becomes honey-combed with openings into dark subterranean chambers, and running streams fall into these openings and continue their course underground...

Narrow tunnels expand into spacious halls, beyond which egress is again afforded by low passages into other lofty recesses... These quiet recesses having remained



undisturbed for many ages... have been transformed into grottoes of the most marvellous beauty. White glistening fringes and curtains of crystalline carbonate of lime... hang in endless variety and beauty of form from the roof. Pillars of every dimension, from slender wands up to thick-ribbed columns like those of a cathedral, connect the roof and the pavement. The walls, projecting in massive buttresses and retiring into alcoves, are everywhere festooned with a grotesque drapery of stone. The floor is crowded with mounds and bosses of strangely imitative forms which recall some of the oddest shapes above ground.

Wandering through such a scene, the visitor somehow feels himself to be in another world, where much of the architecture and ornament belongs to styles utterly unlike those which can be seen anywhere else".

From the "Class-Book of Geology" by Archibald Geikie, F.R.S., MacMillan and Co, London, 1891. And people ask why we go caving !!

---

#### ***Club Matters:***

#### **Welcome... Welcome... Welcome...**

To our newest Member, Nigel Williams for succumbing to hypnotic suggestion and parting with his cash to join our illustrious Club. Nigel wins the prize for the Most Eligible Caver's Car - destined for caving, Nigel purchased some turbo 4wd, 4ws howling monster beast-thing that would be ideally suited to those Florentine roads. No doubt he was also influenced by the fact that one day he would be able to ferry his future caving compatriots to holes in the ground in comfort and style; bloody quickly!

*(Alas, there is no escape - Ed.)*

The Club

#### **Ida Bay Karst Area Management Plan - Issues For Discussion...**

On the weekend of the 25th and 26th of February 1995 there will be a meeting held down at the Hastings area to discuss the issue of the Ida Bay Karst Area Management Plan including the Exit Cave Management Plan.

The Karst Officer from the Parks Wildlife and Heritage, Ian Household will be there to discuss all issues relating to this as well as rangers from the area and as many people as possible with an interest in the management of the karst in the Esperance district. If

you are interested in attending the meeting (and you should be as it affects you as cavers), please contact Shane Hunniford, District Ranger, Esperance. Accommodation will be supplied.

Listed below are some of the issue headings for you to think about. They are a bit broad at the moment but they should be refined a bit more by the time of the meeting.

*1. Access/Permit System.*

- Recreational
- Scientific
- Management
- Commercial/Educational
- Cave classification
- Which caves restricted
- No. of trips per year
- Trip reporting

*2. Gating*

- Which caves
- Which entrances
- In cave gating

*3. Surface tracks/Routes*

- Co-ordination and responsibility
- Trackmarking

*4. Environmental Monitoring*

- Photomonitoring
- Water quality
- Responsibility for the program

*5. Commercial/Educational use*

- Which caves
- Number of operators/number of trips

*6. Aboriginal Heritage*

- Archaeological site management

*7. Introduced Plants and Animals*

*8. Fire*

- Control Burning

*9. In-Cave Zoning for Biological/Geomorphological protection*

*10. Development works*

- Surface works
- In-cave works, eg; Bolts, fixed ropes, bridges ect;

*11. Interpretation and education*

- Fixed information/signage
- Summer ranger programs

*12. Cave Cleaning**13. Acceptable routes/routemarking**14. No-go or reference areas*

- Are these necessary
- If so, which areas
- How to enforce

*15. Research*

- Assessment of projects

*16. Search and Rescue**17. Code of ethics/Minimal impact caving*

- Development of a strategy

No doubt there are more issues not on the list so make sure you have your say and get along there.

Also on the same issue there is still work to be done in Exit cave with surveying, monitoring and water tracing. The clubs are holding trips into the cave for these so please put in an effort and give a hand and get involved in the technical aspect of caving!

Dean

**Cave SAREX 1995**

Yes it is not that far away from the 1995 CAVE SAREX search and rescue exercise. The date put down is the 11th and 12th of March 1995 so make sure that weekend is kept free.

Hopefully we will be having another attempt at what was too wet to attempt last year, that being finding and rescuing a "person" from Growling Swallet in the Florentine Valley with alternate plans if it is too wet for that. There will be things to do for

!! SAREX '95 : 11th & 12th MARCH !!

everyone of all caving abilities with both vertical and horizontal entrances being used. Gear will need to be carried, coffee's and tea's need to be made, communication's need to be maintained and most importantly of all, mud needs to be placed on the local constabulary!

We will most likely be staying at the Florentine or Mt Field with some people going back to Hobart on the Saturday night so come along for a day or the weekend. Remember 11th and 12th of March for a great weekend.

Dean

#### **TCC'S 50TH ANNIVERSARY:**

In case no one's noticed, the Club will celebrate its 50th Anniversary in 1996...

Now 1996 not being all that far away, I thought now would be the time to ask for ideas on how we can celebrate this unique and special event in the Club's history.

So get off your arses, clear the toxic substances out of your brains and start thinking - any and all suggestions are welcome... please write/call/carrier pigeon the editor or anyone else in the club.

Garth Cornelius, Editor.

Here is a TCC contact list that we will try and keep updated in the Spiel from now on. I have included the names of anyone I know that has been to a meeting, dinner or caving trip with the TCC over the last year or so. Some of these people I know have not been caving for a while but you might want to ring them for some information or to try and hassle them out of retirement. If anyone wants to be included on the list or have their name removed, then please let me know.

### *T.C.C. CONTACT LIST*

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**\* \* \* C. L. A. G. NEWS \* \* \***

Sorry, next issue !!

**\* \* \* TRIP REPORTS \* \* \******OWL POT - 18/9/94***

**PARTICIPANTS -** Trevor, Jim, Dean, Adam, Mandy, Michele, Steve, Andrew.

Steve, Michelle, and Andrew were from the VSA and were down in Tassie for a couple of days caving. They had requested a trip through Ice Tube but all the rain and snow put an end to that so a trip was made to Owl Pot instead. As there were so many people it was a very slow trip and the only reason there is a trip report is because **Jim Davies had a big block fall on his back down near the terminal sump.**

**Also as he was coming out to the bottom of the last pitch he heard a big rumbling sound from the end of the cave. I was standing at the top of the last waterfall pitch as it happened and I heard it from there. So future parties should be warned of different conditions at the end of the cave next trip.**

I got back to the car about an hour before everyone else was out only to be met with heavy snow falling and a white forest. It all looked very impressive and I got some great snow photo's. We were all a bit worried about whether we would be able to drive over the gap but we all got out alright with the snow at the gap about 6 inches thick. It certainly looked good.

The mainlanders stayed back at Mt Field for the night and were planning to go to Tassy Pot the next day but I doubt whether they would have got there as the snow was falling very heavily that night even at sea level.

No doubt they must have been impressed with our Tasmanian Spring weather.

Dean

**AROUND THE FLORENTINE IN A DAY - 11/9/94**

PARTICIPANTS - Garth Cornelius, Nigel Williams, Bryce Purden, Dean Morgan.

On the 11 of September this year 1994 the above "Iron Men" of the local caving community performed the herculean task of making trips to Growling Swallet, Pendant Pot, Slaughterhouse Pot, Trapdoor Swallet, Ice Tube, Serendipity, Frost Pot and Asteroid Pot ALL IN A SINGLE DAY !!!!!!!!!!!!!. Yes, that's right. A single day.

And that is not all...

We also managed to climb to the summit of Tim Shea in the morning before all of this happened !!!!!!!!!!!!! I know most of you reading this will be in awe of our achievements. But wait. There's more !!!!! We then finished the day up by taking photo's on the higher flanks of Mt Field West !!!!! Unbelievable but true. No doubt you are all feeling like your lives are all wasted trying to emulate our stunning achievements. And you would be right. There is only so much room in the world for legends. And we are them. Enough said.

And now for the truth.....

Nigel was keen to do some caving, Garth and Dean both had new camera's they were keen to get some photo's with. And Bryce and Dean both had new boots and gaitor's that needed some mud put on them. So we all spent the day walking through the Florentine looking at cave entrances and in the morning drove up Tim Shea for a view of the whole valley. The day was ended with a drive up the end of the 9 road under West Mount Field for some more photo's. We even went underground in the entrance daylight chambers of Growling Swallet.

By the end of the day all films had been exposed and mud had been placed on boots so we all went home and lived happily ever after.

Anon.

<b>* * * BITS AND PIECES * * *</b>
------------------------------------

*(Kindly brought to you by Roger Parkyn via Stu Nicholas - my thanks to both.  
Any comments or feedback welcome - Ed)*

### TASMANIAN OUTDOOR LEADERSHIP COUNCIL COURSES

The Tasmanian Outdoor Leadership Council (TOLC) will be running the following course during 1995. TOLC is comprised of members of the Bushwalking, Rockclimbing, Cross Country Skiing, Caving, and Canoeing Leadership fraternity. These courses are designed for people wanting to become outdoor leaders and some of them are compulsory for people wanting to be accredited. For example, CLAG requires that you complete the Remote Area First Aid, Search and Rescue, Instructional skills and Core Leadership Skills course. (Naturally there is provision for recognition of prior learning.) They are not totally aimed at outdoor leaders though, and having personally completed some of them I thoroughly recommend anyone involved in outdoor activities go along and do whichever is most relevant to your chosen field. The Search and Rescue and Remote area First Aid are both very relevant to anyone involved in caving and could save someone else or your own lives. All of the courses are taken by professionals in their field (S&R police, ambulance officers, meteorologists ect..) but they are also very experienced outdoors people and not just pen pusher working from an office all day.

If anyone wants any more information on any of the courses then please contact-

BRUCE MORLEY  
DEPARTMENT OF TOURISM,  
SPORT AND RECREATION.  
GPO BOX 399  
HOBART TAS 7001  
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### TOLC COURSES FOR 1995

Course	Date	Cost
Weather Interpretation	25-26 March	\$105
	23-24 September	\$105
Land Navigation	29-30 April	\$130
	30 Sept-1 October	\$130
Remote Area First Aid	5-9 April (Southern Tas)	\$180
	21-25 June (North West Tas)	\$180
	6-10 September (North Tas)	\$180
	15-19 November (South Tas)	\$180
Search and Rescue	6-7 May	\$105
	7-8 October	\$105
River Crossing	1 day(date to be advised)	\$50

# TOLC COURSES TO 1995

Course	Date	Cost
Instructional Skills	13 May	\$50
Core Leadership Skills (Risk & Crisis Management; People Management; Leadership & Organisation)	29 May-3 June 25-29 September	\$500 \$500

With the exception of the Core Leadership Skills course they are all run on weekends (The First Aid is run on 3 nights after work and then the weekend) So saying you have not got the time for them is no excuse at all. Participate and enhance your outdoor knowledge.

Dean Morgan

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## T . C . C .   A n n u a l   G e n e r a l   M e e t i n g ! ! !

Our Annual General Meeting is not far away now. The date put down is the last Wednesday in March- The 29th. The ordinary general business of the AGM shall be-

To confirm the minutes of the last Annual General Meeting.

To receive from the Committee, the Auditor, and servants of the Association reports on the transactions of the Association during the last preceding financial year.

To elect the officers of the Association and the ordinary Committeeman being;-

- a) President
- b) Vice-President
- c) Secretary
- d) Treasurer
- e) Quartermaster
- f) Public Officer

To appoint the Auditor and determine his remuneration; and

To determine the remuneration of the servants of the Association.

Make sure you turn up to your AGM and lets get some of the newer members on the Committee.

# The Ins and Outs of U-Anchors

by Roger Parkyn

Recently I have placed several U-anchors as fixed protection and abseil points for rock climbing. I'm not aware of anyone using them underground but I imagine there would be some potential applications for them.

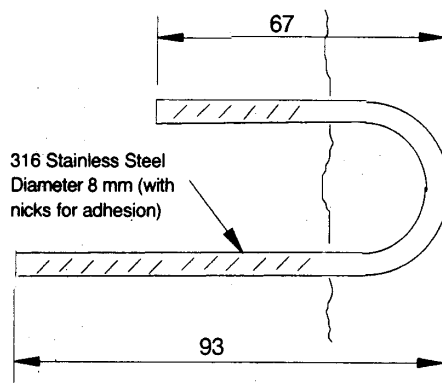
The method involves gluing a U-shaped piece of stainless steel rod into two holes. The method is somewhat inconvenient but provides numerous advantages over many other methods:

- good corrosion resistance
- cheap
- no bolt plates or fixed hangers are required
- low visual impact compared to fixed hangers
- if you can't crank the route you can rap off them
- two of them, placed side by side, make a rap station - no chains are required in most locations

To achieve good results however this method does require a certain amount of skill and knowledge. The next section outlines the method and a following section gives details on a tensile test performed on the system.

## Making a U-Anchor

1. The raw material for the anchors is 316 grade stainless steel of 8 mm diameter (or 5/16 inch). This is available from "Steelmark" in Mornington. Bend the steel to the shape shown below. I have made a jig (well, Stu Nicholas made it actually) to facilitate this which can be borrowed if required.



2. Cut nicks into the embedded legs of the anchor. This can be quickly achieved with an angle grinder.

3. Thoroughly degrease the anchor with hot water and washing up liquid (as sold, the steel has thin layer of grease on it).

## Placing the Anchor

1. At the cliff, after carefully selecting its prospective location, the holes can be drilled (10 mm diameter minimum for this steel).

2. The holes should be thoroughly blown out to remove dust; I use a squeezable plastic bottle with a tube.

3. When all the holes have been prepared and the U-anchors are ready, mix the adhesive. The adhesive to use is "Megapoxy - HT" which claims to be "hydrophillic" (as anything going underground should be!). I use cheap plastic spoons to measure out the required 3:1 ratio of the parts. The adhesive must be *thoroughly* mixed (because the adhesive is quite stiff it will not set unless properly mixed; as John Domeny's initial effort at Proctors demonstrated). When mixed the adhesive changes to a grey color and its viscosity decreases, you now have about 30 minutes to get all your gluing done.



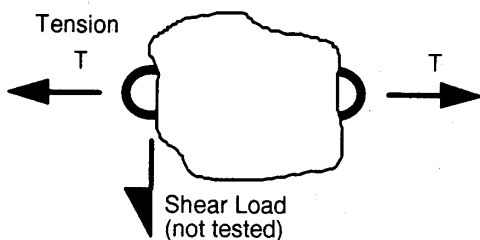
4. Getting the adhesive down the hole is something of an art - especially if you want to avoid getting glue onto everything. I start by smearing adhesive onto the inner surfaces of the hole and, with a clean stick (I find bracken works well), scrapping it in and out a bit so that any residual dust in the hole is mixed in with the adhesive. The stick can also be used to get the adhesive down the hole. Syringes do a reasonable job too but have problems coping with the viscosity of the adhesive. I haven't found a method that avoids leaving air pockets in the hole, these will inevitably reduce holding power.

"... your biners will crap out before the U-anchor fails"

5. Before insertion give the anchor a smearing with adhesive especially into the nicks. Carefully slide the anchor into its hole. After 24 hours curing time the new anchor will be able to take the biggest whippers you can deal it - and keep on doing it for decades.

### Anchor Testing

Partly to satisfy my curiosity and partly to substantiate my confidence in the method I arranged to have a sample tested to failure (thanks to Bob Reid for helping me on that one). The shear strength of the anchor is not in question because the load will be transferred directly onto the rock. I decided, therefore, to use a tensile test (direct pull-out). The method used was to place two anchors in opposite ends of a dolerite boulder as illustrated below. I tried to replicate field conditions as closely as possible, including the air inclusion. Nevertheless it is probable that a better job will be done in my living room than on the end of rope, half way down the Pipes, in fading light! (or half-way down some festering mud-ridden hole for that matter).



### Test Results

The anchor failed by shear (slipping) at the adhesive/steel interface on one of the short legs. This occurred at a tensile load of 32.5 kN (3300 kg). This

is a very good result and compares favourably with the UIAA karabiner requirement of 22 kN with gate closed. It would be reasonable to expect that your biners will crap out before the U-anchor fails. There is still some reserve capacity after failure as the failed short leg had still not come out of the hole.

### What the Test Results Don't Say

This test indicates that of the two anchors tested the weaker one failed at 32.5 kN. Clearly this is a very good result but, with a sample size of only two, it says little about the statistical spread in the anchor strengths. The safety of an anchor method is a function of both the average strength and the variability of that strength (e.g. measured by standard deviation). It is conceivable, for instance, that anchor X could have a higher average strength than anchor Y but because X's strength is more variable the probability of a failure occurring is higher. The question of reliability is pertinent for adhesive anchors because considerable reliance is being placed upon the adhesive and the quality of this adhesive relies upon proper use. I don't feel there is anything difficult about using this adhesive but slap-happy or ill-informed use could be dangerous. For these reasons don't forget the following points:

- Degrease anchors before use.
- Accurately measure the adhesive.
- Don't add extra hardener to accelerate curing.
- Mix thoroughly - look for the colour change from green to grey.

### In Conclusion

Adhesive anchors such as the U system described (and the eye-bolt system used in Victoria and NSW) provide numerous advantages over other methods. The only disadvantages are the effort and knowledge required. The effort is not excessive however and is easily justified by the result - an anchor which will outlast ourselves.