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# SOUTHERN CAVER

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## MEETINGS

The Society meets on the 1st and 3rd Wednesday of each month at 8 pm at the Globe Hotel (178 Davey Street). Visitors and prospective new members are welcome. Further details of our activities can be obtained from any of the above Office Holders, or by writing to us at the address above.

## CONTENTS

Editorial	2
Coming Events	2
Area Reports: 30 July 1993-30 June 1994	3
<i>The Rockpile</i>	3
Feeling the way-a new route within the New Feeling region of Growling Swallet	4
Amalgamation and the Common Caver	5
The Threefortyone (JF341) System-An Update	6
An Extension to Dwarrowdelf (JF14)	10
A home-made rechargeable battery pack for your Petzl Zoom	12
Troll Hole (JF233)	14
Gear Tips (includes Refurbishing Whaletails, Cheatsticks, Mudpegs, Pitfalls with FX2 headpieces, A minimalists emergency kit and other tips)	16
<i>More Rockpile</i>	20
Cave Leadership Accreditation	21
Snippets from the Internet	22
Niggly Cave-a description of two trips down: fears, finds and the joys of tandem prussiking	23
Lilos on the Jane River-1994	27
Welcome Stranger (JF229)	29
SCS Contact List	31
CLASSIFIEDS	31
SCS Warehouse Sales	32

**Disclaimer:** The views expressed within are those of the Authors, and not necessarily those of the Society.

**Cover Photo:** Honeycomb Cave (MC44) at Mole Creek during a wet period. Jeff Butt



## EDITORIAL

Keeping on top of the publishing of the Southern Caver is proving to be quite a formidable task. We nearly had it out last August, but then due to a variety of individual's commitments things slipped. It is now 1995, so this Caver is overdue, but at least it has made it into print. And of course our intentions are good for the next one too.

On the positive side there's absolutely no shortage of material, in fact we have material for several issues. Some of this material stretches back some years, but as it has never been reported anywhere it is very worthy of being put into print. Who knows, maybe it will stimulate some further interest, or rekindle some old interest and lead to better things.

On the other side of the coin, these days there are considerable demands and distractions placed upon 'caving' time. In addition to producing the Southern Caver, time is used for processing cave survey data, drafting surveys, having an input to various karst management plans, involvement with the CLAG (Cave Leadership Accreditation Group), keeping informed about what's happening on the communications underworld (Ozcavers and the International Cavers forum on Internet), and not forgetting time for going caving (keeping abreast of new discoveries) and the cleaning and maintaining of equipment.

I guess it's all a matter of priorities and the New Years resolution this time around was to move the publication of the Southern Caver up a few notches. Wish us luck! Happy reading and caving.

Jeff, Dave and Andrew, the Eds.

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## COMING EVENTS-For your diaries

### **THE IDA BAY KARST MANAGEMENT PLAN-CAVER'S INPUT-Feb. 25/26**

Remember we have been invited to have our say on this management plan, as well as input relating to the Newdegate Cave rehabilitation Plan, the Esperance District Karst Strategy and the formation of a "Friends Group". Everyone had many good ideas as discussed at our meeting on 7/12/94, please support this meeting and make sure your ideas are put forward.

### **SAREX '95-March 11/12**

A second attempt at the scenario: Freddie and Freda went caving in Growling Swallet and didn't come home. This promises to be a very good weekend exercise. Searching a system like Growling to locate a couple of lost and perhaps damaged people is quite a mammoth undertaking, but it could happen and there is a lot to be learned from an exercise like this one, so come along if at all possible. I believe there will be an adequately worked out 'Plan B' this time, one Plan B scenario that comes to mind is: Sam and Sally went caving in Threefortyone and didn't come home.

**AGM....AGM AGM AGM AGM** It's looming nearer! A possible date is Wednesday April 19, but it may have to be May 3 due to a few absences expected in April. You will be kept informed.

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## AREA REPORTS: 30 July 1993-30 June 1994

Over this period a total of 53 trips were recorded in the Society minutes book. On an area by area basis there were:

- 18 trips to Ida Bay,
- 31 trips to the Junee-Florentine,
- 2 trips to Mt Cripps,
- and one each to Mole Creek and the Jane River area

Overall club activity has been higher than in the past couple of years and has become concentrated in the Florentine and Ida Bay areas (everyone wants to go caving close to home?). Not included in these statistics are excursions to the Nullabor and Naracoorte, areas (Russell Fulton) and the lava caves of W. Victoria (A. McNeill). Summaries of trips in each area are included below :

**IDA BAY.** Activity has been in three main areas; The Halfway Hole-Great expectations region received 6 visits, the bottoming of Chiton (IB162) and an unnamed pot near IB129, surface and some underground surveying, and unsuccessful scrub bashing were the main results in this area. We have been surveying the Western Passages of Exit cave (see article in the last Caver) and 7 trips have ventured into this area, including an initial mega-trip with 3 surveying teams, with some tidying work remaining to be done. 'Other' trips visited Mystery Creek (2 times), Midnight Hole, Cyclops Pot and the inevitable scrub-bashing around Marble Hill looking both for caves and lost cavers!

**JUNEE-FLORENTINE.** Growling Swallet (3 visits to New Feeling area), Burning Down the House (2 visits), Welcome stranger (3 visits), Porcupine Pot, and Niggly were all visited but most activity was concentrated in the Rift Cave-JF341 area. Results of exploration in JF341 were outlined in the last caver with a total of 7 trips to the 'Enterprise' extension and 12 trips to the 'Into the Dinosaur' extension, including the first Rift cave-Threefortyone through trip! An update of the work in Threefortyone is included in this issue. Some surface trogging between Rift and Niagara Pot has resulted in the discovery, or re-discovery, of several pots that remain to be fully explored and surveyed.

Andrew McNeill

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## *The Rockpile*

### **SUBSCRIBE TO THE SOUTHERN CAVER - MAKE SURE YOU GET YOURS!**

Yes it is possible to subscribe to this occasionally irregular magazine. For just \$4.00 per issue (yep, no annual subscription, so you won't be ripped off!) we will post out your copy of the Southern Caver. A quick observation of recent issues shows that each is jam-packed with **interesting** articles and **quality** surveys. There are a large number of back issues available too. To subscribe (suggest \$20 for the next five issues), or buy/enquire about back issues, please drop us a line with your cheque.

**SCS, is that the Southern Computing Society???** It seems that nearly everyone in the club is on Internet. This is proving to be quite handy for the purposes of leaving messages for people when they aren't contactable on the phone, sending reminders about meetings, or planning the weekend caving activities, etc. For convenience Internet addresses for everyone have been added to the Club contact list in this issue.

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## Feeling the way-a new route within the New Feeling region of Growling Swallet

Party: Shirley Urlich (USA), Greg Jordan, Sue Baker, Jeff Butt

18/9/93

The aim of the day was to show Shirley one of the most impressive caves in the valley and to let Sue in on the secret of what lay behind the noisy entrance. Water levels were okay and no rain was expected so we headed on down. One is always impressed with the entrance series, it is truly an awesome streamway. Shirley and Sue were suitably impressed. I was quite surprised when Shirley reported that she had never seen Glow-worms before. After some time enjoying their 'tinkling' we continued on in. Greg and Shirley opted out at the 'window' downclimb, so I took Sue for a quick sortie to see Windy Rift and down the streamway to as close as we dared to the first sump.

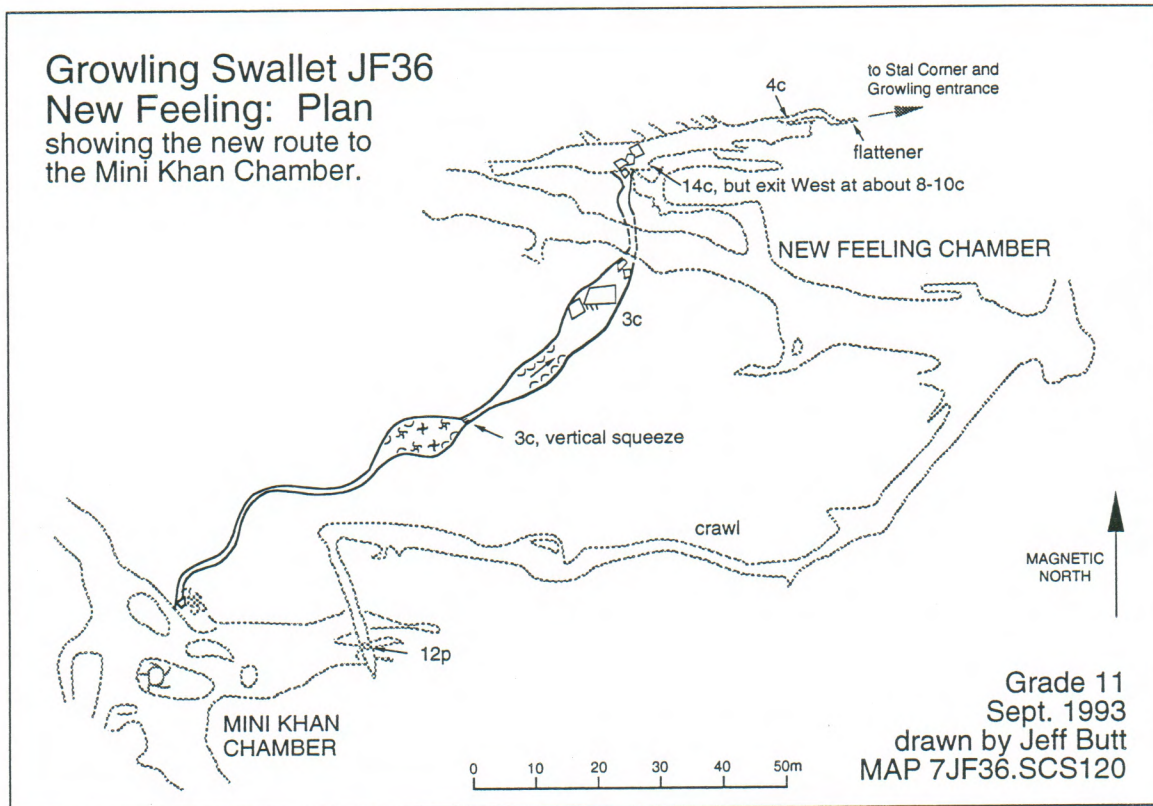
Since we had time at our disposal we decided to have a look at New Feeling, a part of Growling I had never before visited. Given that we didn't have any SRT gear I imagined we'd only make it to the top of the pitch, if the route could be found. All managed the entrance squeeze and down climb into the first chamber. After a bit of looking around the climb up was located and we headed up. A rope was installed as a handline (and to instil confidence) for the downclimb. About 8 to 10 m up, through the rockfall forming the ceiling of the lower chamber a bit more route finding was called for. The others headed to the right (facing the drop), following general trog marks. However, I headed to the left, sidling delicately across a sloping ledge above a large drop. Then through a few rocks and an awkward 3 m downclimb led to a seemingly 'dead-end' formation chamber. Across the way was a muddy streak, indicating that I wasn't the first there. I followed it and it became evident that those before had retraced their steps out. Obviously this wasn't the correct way on, however there was a bit of a breeze in the region of the narrow rift above. A tight 3 m climb with a lot of squirming at the top (not the sort of climb I'd have tried from the top going down) and I emerged into a chamber with a stooping height serpentine stream passage. After about 30-40 m of easy passage I popped out behind a boulder into a huge chamber. A look around yielded a very impressive, but smaller version of the Khan in Kubla. I was quite surprised, this was obviously the Mini Khan! I felt quite chuffed, I had obviously found a route which bypassed the 12 m pitch and some crawly passage. I guess that since this was my first visit to New Feeling I didn't have any established route to follow, or preconceived ideas of the correct way. A quick sortie gave me a general feel for the area, but since the others were some distance away it was not to be fully checked out this time. I retraced my steps out and found the others patiently waiting at the top of the handline. I informed the others of my find and we headed out.

At home I dug out my recently acquired copy of the TCC Explorations Journal (a most impressive publication it is) and found the survey of New Feeling. I ascertained that indeed I had found a new route into the Mini Khan Chamber and that I must have bypassed (went beneath?) the New Feeling Chamber. As a stop gap measure until this route is surveyed I have included a Grade 1 plan.

That's the trouble with Tasmanian caves-there's just no such thing as a 'finished one' (a bane to those drafting surveys!), there always seems to be something new for those who put a little effort in. A little bit of luck doesn't go astray either!

Jeff Butt





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## Amalgamation and the Common Caver

Early in 1994 the subject of amalgamation between SCS and TCC was brought up. A lot of you are probably wondering about what has happened, I can assure you, you are not alone in your thoughts!

At the time the amalgamation idea was being bandied around everybody I spoke to about it, seemed to think it would be a good move, especially since over the last few years there hasn't been much of a following for the Tassie caving scene. Personally I can only see positive benefits arising from amalgamation as there would be more people to go caving with, a bigger gear store and a bigger bank account from which to dip into. The only disadvantages would be a lack of friendly rivalry between people trying to find bigger and better stuff than the other club. The biggest stumbling block seemed to be with the name of the new entity. Understandably SCS don't want to just fold up and merge with the TCC, they want a genuine amalgamation. Also, understandably TCC don't want to change their name, especially as they are Australia's oldest caving club and are close to 50 years old. There were also problems with the name of the caving magazine. The best suggestion was put forward by Rolan Eberhard, who suggested that the Speleo Spiel stays as the (~monthly) newsletter and the Southern Caver stays as the (~annual) journal. This seems a good idea to me. Obviously life

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members of either club would still retain their life membership. So, what can we do about these problematic stumbling blocks?

I would like to see more caving and socialising between the two clubs. Come along to meetings if you can, meet the other club members, talk caves/caving and think about sharing some trips. Hopefully through discussions and interacting with each other we can resolve the stumbling blocks mentioned above for the benefits of the caving scene in Tasmania.

[Eds. note: since Dean presented this article to me, the Wheatsheaf Hotel has ceased to be a hotel, (destined to be just a car yard!) and both SCS and TCC have moved to the nearby Globe Hotel. In the interests of promoting interaction between the clubs both clubs have chosen the same meeting nights (from 8 pm, on the first and third Wednesdays of each month) and the same room! Historically SCS people tend to arrive early, TCC people tend to arrive late, so there is room for each group to conduct their own meetings without undue interference from the other. To date this has been working well with large convivial gatherings and the sharing of information. Shared trips are not far away.]

Dean Morgan, President TCC, Vice-President SCS.

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## **The Threefortyone (JF341) System-An Update**

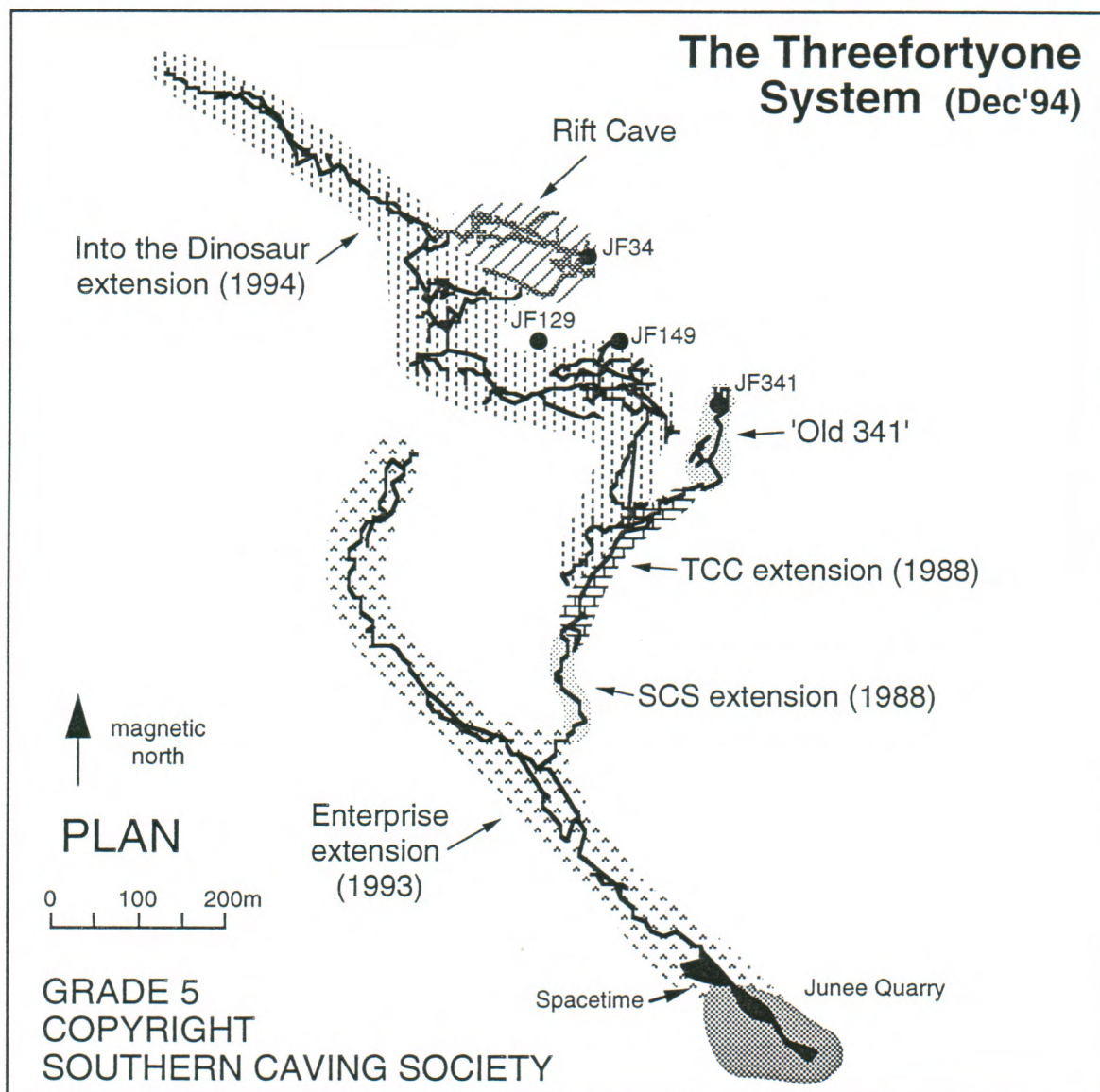
SCS have conducted a considerable amount of exploration and surveying work in the Threefortyone (JF341) System over the previous 18 months. It is envisaged that an issue of the Southern Caver will be devoted entirely to describing this work. A precis of this work is included here to act as a placeholder and to whet the appetites of anyone who happens to be interested in knowing what has been happening down Threefortyone way.

The word 'system' in the title of this article indicates that Threefortyone is now not a cave in isolation, but part of a much larger system, which currently includes; a physically accessible connection to Rift Cave (JF34); proven hydrological connections (Eberhard, pers. comm.) to Washout Cave (JF129), Niagara Pot (JF29), June Cave (JF8), an unnamed swallet (JF126) east of JF341 and an unnamed swallet (JF146) in the vicinity of Peanut Brittle Pot. In addition the Threefortyone system also underlies several other known caves, such as JF149, Murder Pot etc. A line survey of the system as it currently stands is shown below, some of the major features are indicated.

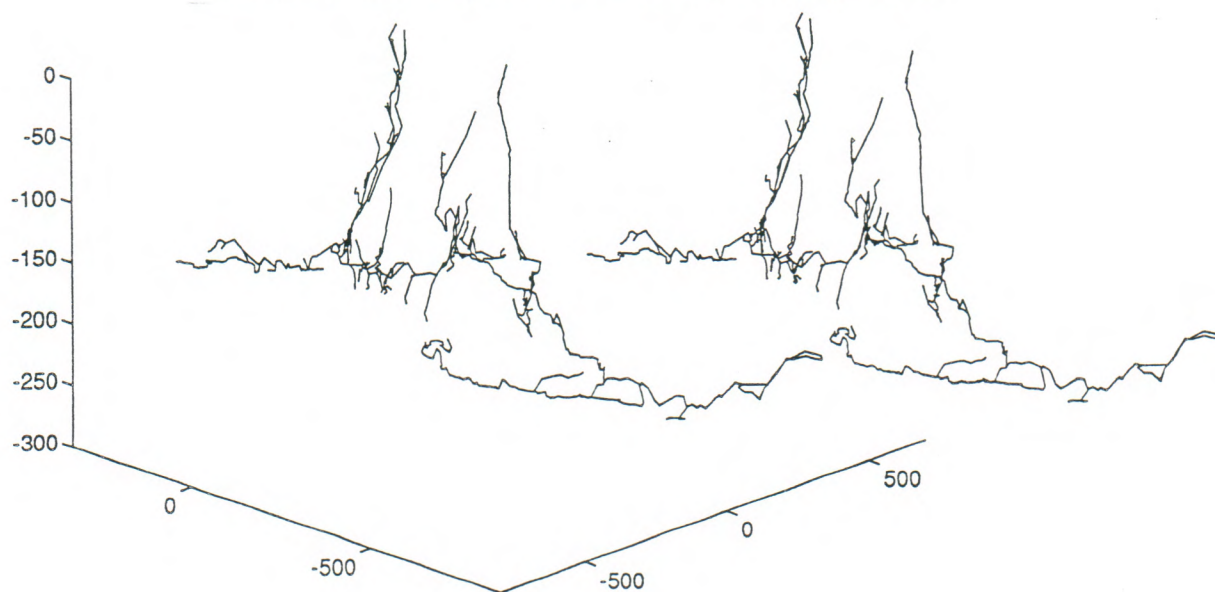
Currently the Threefortyone system has a surveyed length of 8.1 km (979 legs!). Note that this distance doesn't include all the passage in 'Old 341' and the '1988 TCC extension', it only includes a main traverse through these regions. A conservative estimate of the length of the system is 9 km, but the potential for more finds still exists. The depth of the system is 249 m, the high point being the Rift Cave doline, the low point being the downstream sump in 'Enterprise'. To give an idea of the layout of the system I have included a stereo pair of images.

In June 1993 the 'Enterprise' extension off the 1988 SCS extension was discovered by Rolan Eberhard and myself (reported in SCS Newsletter, September 1993). Over the next few months nine trips were made into this region, primarily by Rolan, Dave Rasch and myself. Dean Morgan and Heather Kirkpatrick also contributed. The name 'Enterprise' was coined through via a few





A stereo pair of the JF341 system, viewed from the SW at 30deg. elevation



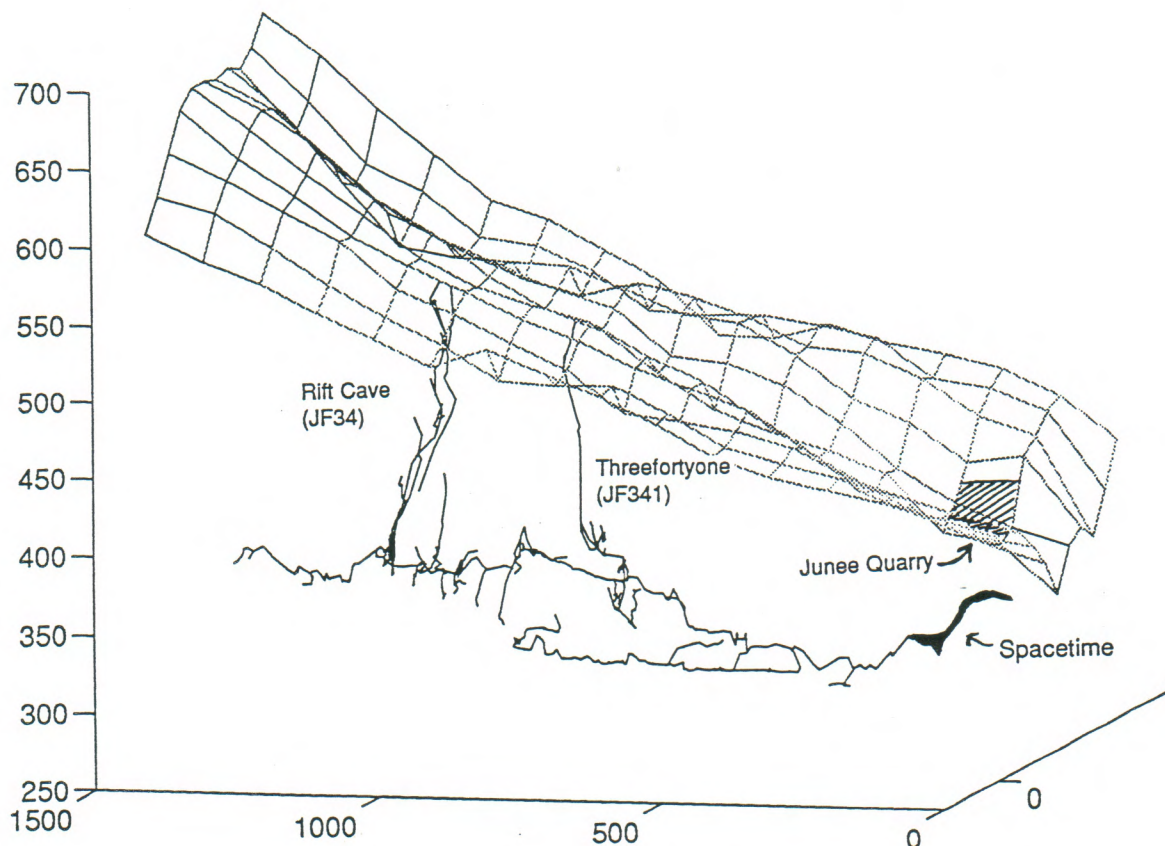
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lateral thoughts. Access to the region was through a very muddy passage, mud which really clings-on, this passage became known as cling-on way. Cling-on (Klingon) brought the space soapie Star Trek to mind, .... Enterprise seemed like a good name. Names of other features in the area have followed this theme.

Enterprise carries a moderate sized stream, which carries Niagara Pot water. Upstream the stream passage ends in rockfall, dry upper levels do exist, but have not allowed this rockfall to be bypassed. Interestingly the upper level passages approach to within about 100 m of the 1994 extension 'Into the Dinosaur' which will be described shortly. Downstream the water sumps, but the dry upper and generally ascending levels increase to extremely large proportions. The chamber ('Spacetime') at the southeastern end of Enterprise is approximately 200 m long and typically 20-30 m wide and 10-20 m high (ie. of similar size to Xanadu in Kubla Khan). Vast areas of the ceiling display very long straws (3-4+ m) and the floor is littered with fragments of straw about 50 cm long. The survey shows that parts of Spacetime underlie the old Junee Quarry and the vertical separation is estimated at 50-60 m. One speculates that blast damage (whiplash) is the cause of these broken straws. It is fortunate that the quarry is no longer operating and important that it never returns to production. I have included a perspective view of the system and the overlying topography to indicate the relationship between Spacetime and the Quarry. The southeastern end of Spacetime is about 540 m horizontally from the northwestern end of Junee Cave (JF8).

The JF341 System viewed from the WSW at 10 deg. elevation



In March 1994 the 'Into the Dinosaur' extension was discovered by Dave Rasch and myself (reported in Southern Caver 57, May 1994). Features of a formation filled room (ie. a large balcony with a drapery of teeth) closely

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resemble the jaw of a massive dinosaur and since the extension was accessed via the Dinosaur's foot streamway (named by SCS in 1988), 'Into the Dinosaur' seemed an obvious choice. Other features have followed this theme, the 'Bile Duct' being one of the most hated obstacles! In the initial exploration phase (March-June) twelve trips were made into this region, primarily by Dave Rasch, Andrew McNeill and myself. Sue Baker and Sarah Boyle also contributed. Included in these trips were two micro expeditions, with an average team of 2.3 persons each day, caving each day for three days at a time. During these expeditions each trip yielded more and more cave (caving heaven!) and we systematically explored and surveyed over 2 km of new passage.

The majority of cave found during the March to June period consisted of large dimension dry passage interspersed with large chambers (Dinosaur's Jaw, The Stomach, Black Arches, Theatre Royal, Denial Delta, The Entertainment Centre and The Woodchip Mill). Note that in the interests of cave conservation routes have been taped and/or marked through many of these chambers and other regions of the cave. A few small signs have been placed at strategic locations to direct visitors to alternative routes or to remind them to de-boot and/or de-suit. All visitors to Threefortyone are requested to use the marked routes and comply with the signing. In some of the passage the existence of sizeable dolerite boulders/cobbles alerted us to proximity of ancient large diameter swallets, Rift Cave coming to mind. Theatre Royal contains a waterfall (the JF129 stream) which plummets down from an upper (inaccessible) level into a huge subterranean 'doline' which itself leads to a small streamway (the JF146 stream) which sumps out. Also the large (6 m wide, 10 m high) stream passage northwest of Denial Delta carries water in wet periods. This represents Rift Cave overflow. Similar overflow is seen at one other location. The base level Rift flow has not been located in Into the Dinosaur, but is seen in the Enterprise streamway.

As explorations continued our survey data indicated that we were very close to Rift Cave and a considerable effort went into trying to close the final 10 m gap. This process was made more difficult by several blind shafts. Work occurred on both the Threefortyone and the Rift Cave side. The final connection was made on 3/6/94, and as the connector involves both going down and up pitches work on both sides proved to be essential. The two surveys (Threefortyone and Rift Cave) were then linked and the mis-close was found to be reassuringly small, just 8 m or 0.4%. [It is easy to be wise with hindsight, but the linking of Rift Cave has shown that the blasting used by TCC to gain access to their 1988 extension of Threefortyone was not absolutely necessary as this passage is accessible from Rift Cave. Life is like that.]

In the latter half of 1994 a further seven trips were made to Into the Dinosaur, with access being via Rift Cave. Access to the northwestern portion of Into the Dinosaur is fastest via the Rift Cave entrance, but this route is more technical and wetter than that via the Threefortyone entrance. However after personally doing something like twenty trips in via Threefortyone, the route via Rift Cave was a pleasant change. It would be quite nice to have an alternative to both of these entrances. We're currently working on that, stay tuned for further developments.

Oh and in case you were interested, the drawing up of the survey is shaping up well. Drawn at a scale of 1:500 the survey takes up a reasonable amount of floor space. It is envisaged that the final product will be MacDrafted and be along the lines of a street directory.

Jeff Butt

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## An Extension to Dwarrowdelf (JF14)

At the bottom of the second pitch in Dwarrowdelf there are two possible ways on. To the left is a short dry passage to the third pitch, while to the right there is a steeply descending passage which takes all the water from the second pitch. Ten metres down this wet passage, there is a dry rift off to the left, which can be reached by a bridging move. The dry rift is about 8 metres long and terminates in a second dry passage which descends to the right, roughly parallel to the first wet passage. A good draught can be felt here. The dry passage descends for about 5 metres, becoming progressively narrower and ultimately becoming a squeeze with an inverted-L profile. This squeeze can be negotiated by lying on one's stomach with one leg hanging down. After about 3 metres of squeezing, the bottom drops out of the passage into a pitch which is approximately 20-25 metres deep. A large ledge can be seen about 10 metres down.

The pitch is quite difficult to rig. A flake about 3 metres high back at the start of the squeeze provides an adequate backup point, the rope being threaded along the squeeze to a bollard which is nicely over the pitch. It is best to enter the squeeze feet first with the abseiling device already threaded onto the rope, as it is very difficult to attach once in the squeeze. In fact, it is difficult even to look down at your hands! The bollard can be rigged with a tape sling while succumbing to gravity. Having dropped down out of the squeeze into the pitch, the rebelay on the bollard can be crossed in relative comfort. At this point it is wise to rig a good-sized sling to allow a solid leg-thrust back up into the squeeze on the return journey!

After descending 10 metres to the ledge, a tension traverse out to a jug on the right hand wall allows a redirect to be established for a free-hang to the bottom.

The pitch is a bit wet, the water presumably being that which disappeared earlier (ie. fed from pitch 2). It drains down a muddy chute into a narrow slot at the bottom. Running water can be heard past the slot, but there is no air movement here.

About 10 metres up from the pitch bottom, there is a tall narrow slot in the aven wall. This slot is the source of the breeze felt earlier up in the squeeze. Looking into the slot, a passage about 1 metre wide apparently turns right out of sight. This slot is, however, definitely on the narrow side, and would have to be entered on the abseil with "helmet off". The amount of airflow through the slot warrants work to widen it to a more comfortable width.

There is the possibility that this lead merely reconnects to the third pitch in Dwarrowdelf, but in view of the proximity of Troll Hole (JF233) [65 m to the ESE, an article on Troll Hole also appears in this issue. Ed.] nearby, one should not discount the possibility of new cave.

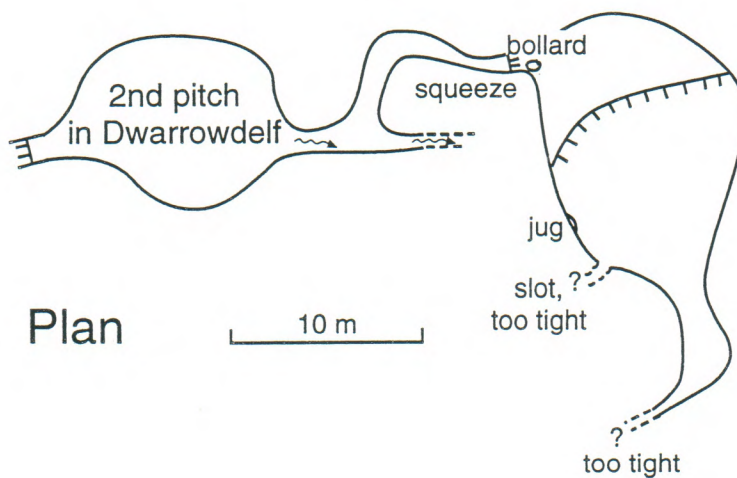
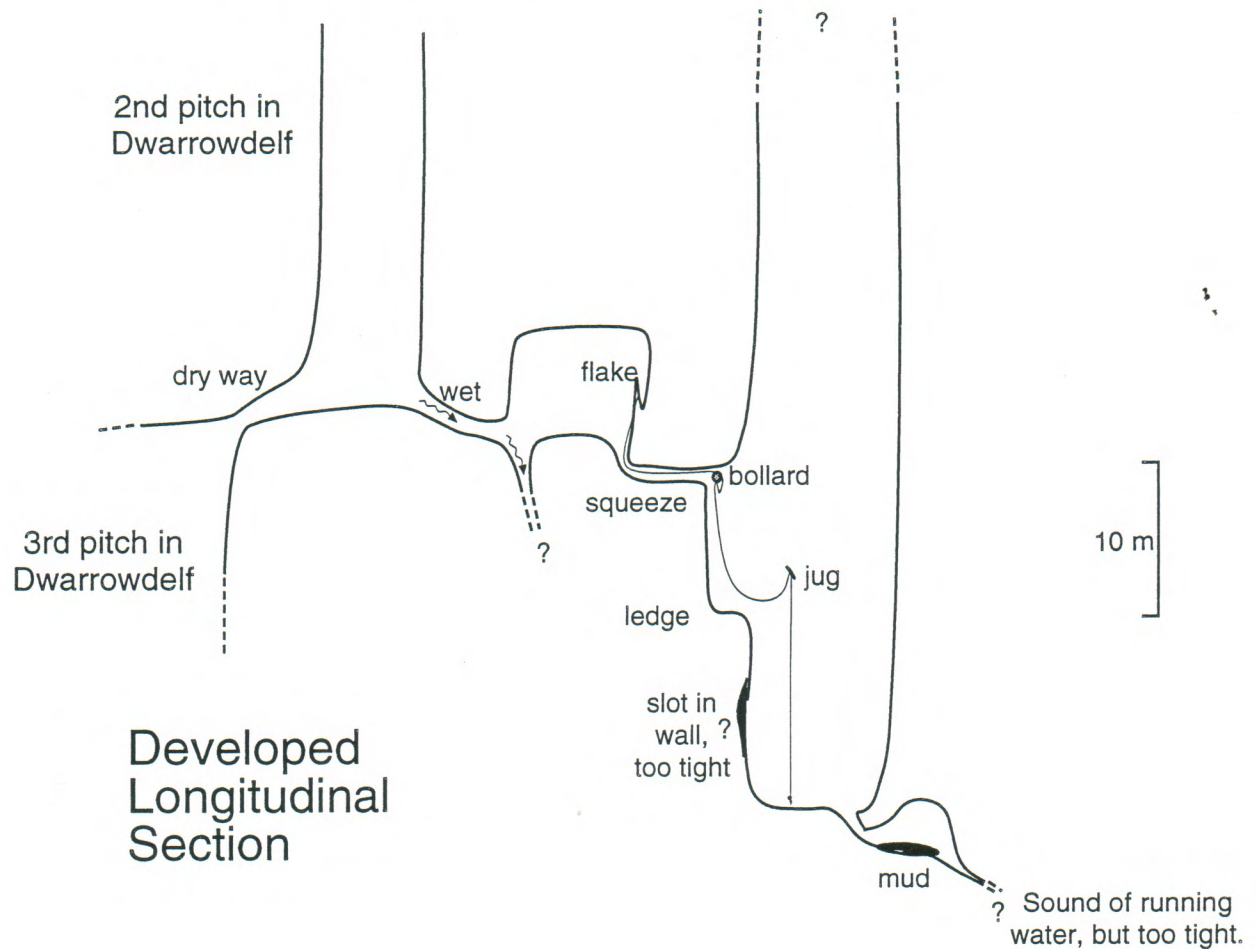
A final note: The L-shaped squeeze has developed a bit of a reputation for snagging prussik gear on the return journey and creating blue impressions of chest ascenders. A number of SCS cavers have preferred to sit and "keep an eye on the rigging" at this point!

Dave Rasch

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## An extension to Dwarrowdelf (JF14)



explored 1989  
Drafted by Dave Rasch

Grade 11  
MAP 7JF14.SCS119  
SOUTHERN CAVING SOCIETY



## A home-made rechargeable battery pack for your Petzl Zoom.

A Petzl Zoom is a very handy secondary light source and many cavers use them for this purpose. However the cost of buying throw-away batteries (4.5 Volt flatpacks) soon adds up. Retail prices for an alkaline flatpack vary in the \$8-9 mark (**NB. SCS Warehouse Sales has them for just \$6.50, see the back cover of this magazine**). These batteries are quoted at lasting for 18 hours (with a standard bulb), so that equates to about 40-50 cents per hour of use. There are commercially available rechargeable battery packs (rated at 7 hours with a standard bulb) for the Zoom, but these are expensive and will set you back \$70 and an extra \$25 for the charger. You can make your own for under \$30, it's very easy, read on.

Most Zooms come with, (or you can purchase for about \$9) a battery adaptor, which lets you run them on 3 AA cells. Rechargeable Nickel Cadmium (NiCad) batteries can be fitted in these, but there is a catch however as the AA NiCad is only rated at about 450-600 mA-hours (depends of brand) and this translates to only about 2-2.5 hours light with the standard globe (250 mA). *[A standard alkaline cell has an output voltage of about 1.5 Volts (when fresh, but this gradually wanes with time), so three in series gives you about 4-4.5 Volts over the life of the battery. The NiCad has a lower output voltage of about 1.25-1.3 Volts, so three in series give you about 3.75-4 Volts for the capacity of the battery. This lower voltage is compensated by the lower internal resistance of the NiCad cell (you can get about 10 Amps from a shorted NiCad, but only about 4 Amps from a shorted alkaline) and you get similar brightness from NiCads as you do with alkalines.]* Changing batteries every two hours isn't very convenient, it would be better to fit a larger capacity batteries into the existing battery compartment.

There is a size of NiCad battery called a 'sub-C' (about 41 mm long and 22 mm in diameter), which is a little smaller than a standard C cell. These are typically used in model racing cars. A sub-C has a rated capacity of between 1400-1700 mA-hours, depending on brand (SAFT are 1700, Sanyo 1400 and the generic types 1200). If possible get the higher capacity batteries, which may, but not always cost more. Three cells coupled together (as in the diagram below) fit nicely (stacked vertically) into the battery compartment of the Zoom and with a standard bulb provide light for about 7 hours (equivalent to the commercially available version), quite a useful length of time. At a cost of \$7-9 each (at the time of writing) this means that for about \$21-27 you can have a very useful rechargeable battery. After about 6 uses the NiCad battery will prove to be cheaper (not to mention friendlier to the environment) than using disposable batteries. Since NiCads should last many hundreds of cycles you will end up being well ahead with time.

There has been a lot written about NiCads over the years, some of their known habits and recommended procedures are:

- when sitting around they go flat reasonably quickly, so if it has been lying around for several weeks or more, give it a charge before using it.
- they tend to have a memory, in that if the battery is only used for a short time repeatedly it thinks that it only has that much capacity. To avoid this it is best to flatten them after each use and give a full charge. If your battery builds up a short capacity memory you can remove this by giving it several full charge/discharge cycles.
- they have a sudden (over a few seconds) voltage drop off when going from nearly exhausted to exhausted. This means that they can catch you unawares.

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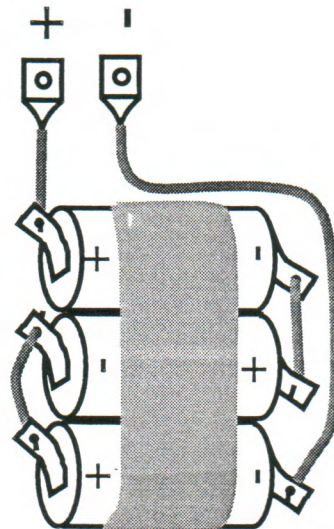


If using a battery like this as a main battery I'd recommend you carry a spare battery (probably a standard alkaline one) in a reasonably accessible place. -it is best to charge them at a constant current, typically at about 0.1-0.2 times their capacity (ie. at 170-350 mA for a 1700 mA-hour battery) and give them a 50 percent overcharge (ie. for a 1700 mA-hour battery you want to put about 2500 mA-hours through it, eg. 250 mA for 10 hours).

### Assembling your Battery Pack

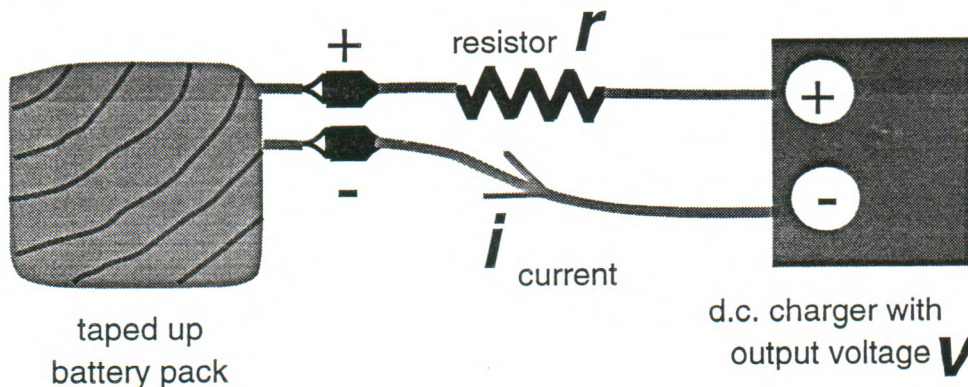
This is quite straight forward. The sub-C batteries come with metal tabs welded onto the ends. Bend each tab outwards, then with a hammer and nail make a small hole in each tab. Assemble the three batteries top to tail (as shown in the diagram below) and tape them together with duct tape or similar.

Solder wires as shown and add male spade connectors to the two leads, these will fit nicely into the female connectors in the Zoom. Bend the tabs down above their own battery and then with tape make sure you insulate the ends and tabs of each battery. The battery fits snugly inside the Zoom battery case with the batteries oriented horizontally. That's it!



### Charging your Battery Pack

This is also quite simple, read on. You can use any plug pack transformer with a d.c. output providing a voltage of about 5 Volts or more. A charger for an Oldham (4 Volt) miners light this will produce about 4.8-5 Volts, one for a 6 Volt Gel Cell light will produce about 7.2-7.5 Volts and the car cigarette lighter socket produces 12-14.5 Volts (depends if the engine is going). Say the output voltage on your charger is  $v$  and you want to charge your battery at the rate of  $i$  mA, then all you need to do is to connect a resistor (rated at 1 Watt if  $v$  is less than 9 Volts, or 2 Watts if  $v$  is less 14 Volts) of value (or close to)  $r$  in series with the battery (as shown in the diagram below), where  $r = (v - 4.2) * 1000 / i$ . So for charging a sub-C battery pack at 250 mA, use a 2.7 Ohm resistor for a 4 Volt Oldham battery charger, a 12 Ohm resistor for a 6 Volt Gel Cell charger, a 33 Ohm resistor for a car cigarette lighter socket, etc. Remember to remove your battery from the charger after the appropriate period! The odds and ends required to convert a d.c. source into a charger should only set you back about one dollar.



Jeff Butt

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## Troll Hole (JF233)

Troll hole was discovered and named by Philip Jackson in early 1989 during a trip to Dwarrowdelf. The exact circumstances of this discovery are uncertain, but wandering off for a dump may have been the reason Jacko wandered some 65 m away to the ESE and found a draughting hole within a 6 m diameter doline. There were no signs of visitation and one speculates that the feature may have undergone a comparatively recent surface collapse, certainly the mud in the upper reaches supports this idea.

The history of the first couple of trips is not well recorded, but at different times they involved Phil Jackson, Greg Jordan, Dean Morgan, Dave Rasch and Rick Burbury. The initial three small pitches (approximately 8, 10 and 10 m) are connected via some particularly disgusting passage that rains a mixture of mud and small rocks on the unfortunate abseiler, and those below as well. Things then start to open out with a larger chamber heralding even larger things to come. The walls also improve in consistency and become solid enough to actually start looking for anchors. The cave bifurcates at this point, with two pitch series, the "Thick" and the "Thin", both of which rejoin as avens into the final(?) large (30-40 m in diameter) chamber. This final chamber is characterised by a lot of rockfall including some very large blocks, and also some nice formation.

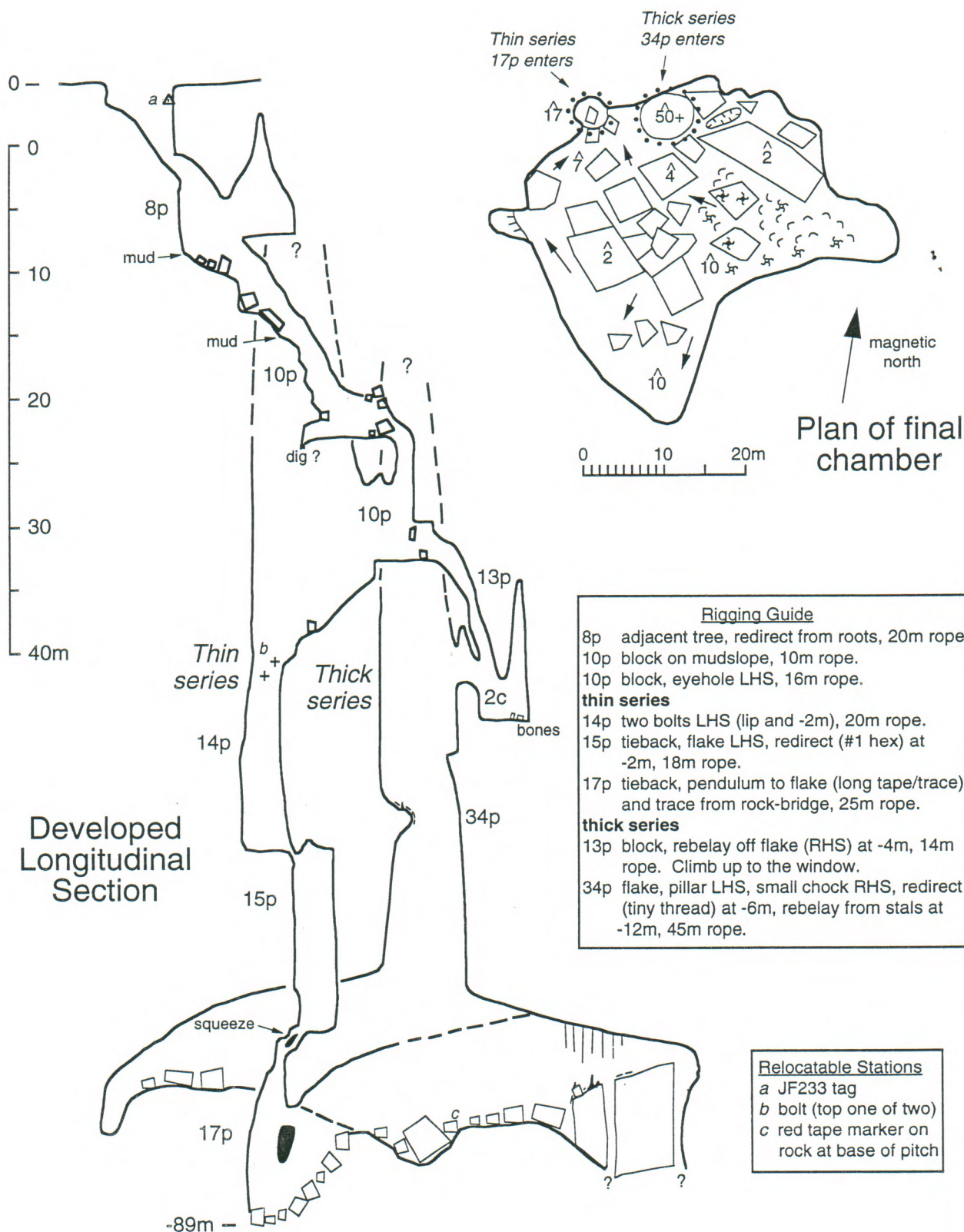
The "Thin" series (pitches of 14, 15 and 17 m) was explored on 23/8/89 by Dave and Rick. The pitches are dry and straightforward, with the abseil into the final chamber only about 2 m from its NW edge. Rick is not a small person (about 195 cm tall with large shoulders) and, while gravity assisted posting him through the squeeze at the top of the 17m pitch on the way in, the reverse manouvre on the way out proved to be an interesting problem, requiring about half an hour of dangling at the top of the pitch, some heavy breathing and some bruised ribs. "Thick" cavers beware.

The less obvious "Thick" series is accessed via a 13 m pitch followed by a 2 m climb to a window into the side of a large aven. This was initially estimated to be up to 70 m (based on 4.5 seconds freefall) and before it could be bottomed, news of it 'got out'. Stefan Eberhard (TCC) phoned Jeff Butt and informed him that he, Nick Hume and Dean Morgan were going to do Troll Hole the next day and wanted to know if anyone from SCS wanted to come along. [This was in the days where rivalry between TCC and SCS was quite high!]. On 7/10/89, Nick, Stefan, Dean and Jeff visited Troll Hole. Nick and Stefan bolted down to rig the undescended pitch. Dean and Jeff followed, surveying en-route. The large pitch was found to be only 34 m, somewhat shorter than the estimate!, but nevertheless still quite impressive. Not surprisingly the "Thick" series entered the the same large rockfall chamber that the "Thin" series accessed. After a reasonable look around whilst surveying, it became apparent that there were no promising leads, although a couple of slots down between large fallen blocks were noted, but not investigated.

Troll Hole was physically tagged with the JF233 tag in June 1990 and the tag linked into the survey. The hitherto unpublished survey was drawn at 1:200 in 1989, but lay in the 'to be drafted pile' until quite recently. The efforts of a few hours Mac Drafting on the the computer has produced the Developed Long Section accompanying this article. A plan of the pitch series is difficult to interpret as the pitches corkscrew around above each other, however a plan of



# Troll Hole (JF233)



Drafted by Jeff Butt, 1989  
Surveyed by Jeff Butt, Dean Morgan, Philip Jackson,  
Greg Jordan, Dave Rasch, Stefan Eberhard. 1989.

SOUTHERN CAVING SOCIETY MAP JF233.SCS101 Grade 54 COPYRIGHT



the terminal chamber has been included. Troll Hole is basically a very vertical pothole, 89 m deep which bifurcates half way down and terminates in a large rockfall chamber. The upper reaches of the cave are very muddy and good anchors are sparse. With depth the quality of the cave improves and the final pitch down the "Thick" series is very pleasant. The terminal chamber contains a reasonable amount of formation which mostly seems to have developed since the substantial rockfall took place. There are no obvious side passages from the terminal chamber, so further exploration should perhaps concentrate on burrowing underneath the large blocks in search of a downward continuation. The length of Troll Hole is approximately 200 m, however this figure doesn't do justice to the spaciousness (approximately 30 m by 40 m by 5-10 m) of the terminal chamber. A guide to the rigging is included with the survey for convenience.

Note that Troll Hole is only about 65 m to the ESE of Dwarrowdelf (JF14) and the entrance to Troll Hole is about 8 m lower. This places the large final chamber in Troll Hole at about the same level as the base of the third pitch (55 m) in Dwarrowdelf. Dave Rasch has reported (elsewhere in this issue) on incompletely explored leads at the base of the second pitch in Dwarrowdelf. This is food for thought and warrants another look at both of these caves. Go to it!

Dave Rasch and Jeff Butt

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## Gear Tips

### **Refurbishing your Whaletail descender.**

Racks and Stop descenders have replaceable wear surfaces, this gives them an enhanced life. The Whaletail descender is similarly priced but lacks replaceable wear surfaces, so when you have worn down to the safety gate retaining bolt at both ends (ie. you have reversed it) it is worn out. Since I don't like trashing gear without valid cause, I did a bit of thinking about how to add a bit of extra Aluminium to my worn out Whaletail. My first thought was to weld some extra Aluminium onto the worn tails, but this was out of my technological reach. Instead I decided to try drilling a few strategically placed 6 mm diameter holes (along the rope side margins of the tails, see the diagram below) and inserting some 6 mm diameter Aluminium Rod. The drilled holes only penetrate into the spine of the descender about 2-3 mm and so do not compromise the structural integrity of the device. The retrofitted rods effectively fill out the wear surfaces of the tails to where they used to be. The choice of two 6 mm rods per tail does make the new surface more irregular than the original, for this reason three smaller diameter rods would probably be better. Araldite was used in the holes in the spine before inserting the rods so as to prevent them falling out, (or perhaps acting as micro-pulleys), though the fit was tight and this measure was hardly necessary. I am aware that araldite does soften with heat.

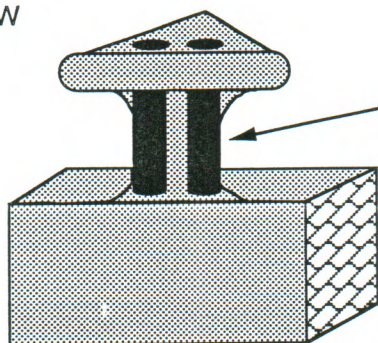
In use (several Midnight Hole trips on moderately stiff 11 mm Bluewater rope) I have not had any problems with the rod rotating or falling out, nor has the araldite softened. There is some tendency for the gaps between the rods to act as fluff collectors and I suspect that this is because of the extra edges with the new geometry increases the rate of wear on the rope. Friction of the retrofitted device was as good, if not better than that obtained from a new Whaletail. Wear

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on the rod was reasonably high and I suspect the material I used was softer than that in the Whaletail itself, though a single Midnight Hole trip on muddy 11 mm rope produces substantial wear (grooves about 5 mm deep into a harpoon!) and one wouldn't even think of using an eight ring for this trip!

3D VIEW



retrofitted  
6 mm diameter  
aluminium rod

TOP VIEW



wear surface when worn out  
wear surface when new

In summary, this method works quite well and a worn out descender has effectively been re-vitalised. When the wear increases it will be a relatively simple matter to add some new rod. Because of the tendency to fluff the rope up more than normal I would not recommend the use of such a refurbished whaletail descender on ropes smaller than 11 mm diameter.

Jeff

### Patching cave packs or PVC trogsuits.

From recent experiences with reinforcing lilos I learned from Bruce Morley and Russell Fulton of a two part glue (bulk agent and hardener) that does an exceptionally good job. The glue in question goes by the name of SC2000 Cement and is used in industrial conveyor belts, a place where it takes a beating. Rafters commonly use this glue for patching/reinforcing rafts and it takes a hell of a lot of punishment. This glue could be the perfect one for mending holes in PVC trogsuits or caving packs. It is available from several places in Hobart, but the best source seems to be from a company called Bryce Watson Pty Ltd in North Hobart.

Sarah

I have had a lot of success patching PVC suits with polyurethane glue, the kind sold as seam sealer. The quality of the bond seems to vary with the brand a bit, and some pre-treatment of the surfaces with a good solvent helps a lot. The type of glue advertised to repair/rebuild shoe soles doesn't seem to have either the flexibility or the bond strength of other brands.

Dave

### Are you still lugging your cotton overalls around?

The other day whilst cleaning up a batch of gear, including a pair of cotton overalls it was obvious that wet cotton overalls are considerably heavier than a wet trogsuit. The opportunity was there to quantify this observation and the scales revealed the wet weights of both the cotton overalls and the nylon trogsuit to be 3.0 and 1.6 kg respectively. The wet cotton overalls being almost twice as heavy as the trogsuit, food for thought. When I made the change from cotton to nylon about three years ago I was amazed at how easier and more comfortable it was to cave in my new suit than it used to be. The recommendation here is that if you are still using cotton overalls in wet environments you are doing it the hard way! Oxford nylon (waterproof coating on the inside, but this wears off after

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about ten trips) is readily available and a self made suit will set you back about \$60, or if you prefer there are several people around Hobart who will crank one out for you at a cost of about \$100-120. Another bonus of a real trog suit is that they do wear much better, mine has had about 50 hard trips with minimal maintenance, whereas cotton overalls need much more in the way of on-going visits to the sewing machine.

Jeff

### **Sewer pipe light supplies dry up!?**

Many people will be familiar with the Sewer pipe light described by Peter Ackroyd in Australian Caver No 121. One of the integral components of this, the 40 mm screw end cap (to fit the 40 mm male PVC to Iron coupling) is now no longer made, evidently the standard has changed to 50 mm. So, if you are planning to build yourself a sewer pipe light it might be worth checking out some country plumbing supply shops to see if anyone has some left in stock. Things are grim in Hobart, none can be found, 'cept maybe some on the outside of buildings!

### **Cheatsticks, Mud stakes and Inner tubes?**

Exploration in Threefortyone in recent times has led to several specialised pieces of gear being constructed to tackle particular obstacles.

In the downstream continuation of the main Rift Cave overflow stream (you really need to see the survey to know where this is, in time) we were faced with a 4 m high vertical bank of dirt fill with an enticing body sized hole at the top. It goes without saying that there were no footholds or scaling poles at hand so a new solution was needed. We constructed several 40 cm long snowstake type pegs (made from lightweight Aluminium mesh extruded rod), equipped with a karabiner hole in the end and, using a dolerite cobble as a hammer, a micro ladder and a belay rope we easily aid climbed this little obstacle using some of the stakes as steps and a few more as ladder anchors at the top. Unfortunately we only found about 50 m more passage, but at least we could remove this question mark from the survey.

In the downstream phreatics continuation of the streamway which sinks from the middle of the main old Rift Cave passage, and also in the 'Dave's Aven' area, we were confronted with a number of difficult vertical climbs. Dave fabricated an 8 piece Aluminium tent-pole type of cheatstick, complete with a detachable V-shaped hook on the end, total cost \$8. Armed with this little beauty it was possible to access anchors up to about 4 m out of reach, then whilst being belayed and installing protection en-route we were able to aid these climbs and remove two more question marks from the survey.

Mmmm, wonder how a 20 m long cheatstick would go in 'Theatre Royal' where there is a high level passage and waterfall coming in? There is a good looking stalagmite on the lip to take a sling, unfortunately there's nothing in the way of protection available, so this one probably wont be a goer!

Another standing problem is how to safely ascend smooth walled large diameter phreatic tubes inclined at about 50 degrees to the horizontal. A bolt ladder is one option, but we were thinking laterally and wondered about using tractor tyre Inner Tubes, a long cheatstick, a pump and a long piece of tubing. The aim would be to place the Inner tube, with a sling, tubing and a light line attached up into the phreatic tube, then inflate the tube (via the pump and tubing) until it was a good friction fit; then pull a rope up via the light line and prussik up the rope.

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When one reached the tube a second tube could be placed through the hole up further into the phreatic tube and the process repeated. One then crawls through the first tube to the next one, before repeating the process. If the whole thing falls to pieces around you and you end up slurping down out of the phreatic tube, at least you have some chance of a soft landing by aiming for the inner tubes! Sounds like a good idea, but a few refinements may be needed for a working system!

Dave and Jeff

### **Pitfalls with Speleotechnics FX2 headpieces.**

FX2 headpieces to all intensive purposes look just like Oldham headpieces and infact they come from the Oldham factory, but the Oldham brand is ground off prior to being over stamped with FX2. Oldham batteries are designed to be charged through the headpiece, via a charging key and clip. FX2 batteries are charged by removing the headpiece cable and attaching the charger directly to the battery. Now, if you happen to have a dead FX2 battery and don't want to spend the horrendous amount of dollars to replace the battery, you may be considering converting the FX2 over to a gel cell system. If so, you should be made aware that the FX2 headpieces don't have the necessary innards behind the key hole to accept key charging, presumably this is to prevent incorrect charging of the FX2 battery. The missing innards, 5 small pieces will set you back about \$25-30 if buying them new. It is worth noting that these pieces can be mailordered from the UK for substantially less, even when airmail postage is included. It is even possible to purchase secondhand pieces for further savings.

Jeff

### **A minimalists emergency kit.**

Are you prepared for the unexpected? If you are like most cavers, then probably not! What happens if you get trapped underground, have a multiple bulb/light failure, get lost/stuck/separated or have an accident? With just a few carefully chosen items you can make the wait much more bearable, or avoid it altogether! For interest my emergency kit, which weighs 550 gm and takes up a volume of about 0.8 litres consists of the following items:

- 2 garbage bags (emergency raincoats, collecting water drips, extra warmth, removing decaying animal carcasses from drinking water etc)
- 4 AA batteries (marked with an expiry date, keep them fresh)
- 120 gm chocolate (eg. 2 Mars Bars) for an energy hit
- 1 triangular bandage (also useful as an absorbent pad)
- 1 elastic roller bandage (useful for snake bite treatment)
- 1 space blanket
- 2 small candles (as a heat source under a space blanket tent around your body, or as a light source)
- box of matches
- a film container of spare bulbs (at least one of each of the common types)
- 1 heat pack (a more recent addition, I tried one during a S&R exercise and to good effect, place it close to the skin down the front of your trogsuit).

This kit is augmented with a spare jumper and balaclava (both kept dry), a Petzl Zoom (as my secondary light source) and a AA penlight battery worn around the neck (as an ever-present third, or second if you are on a sortie away from your pack!) light source. Note that some people may wish to carry a more comprehensive first aid kit, however if you add too much stuff then there is a strong tendency to leave it behind due to the weight and space required.

Jeff

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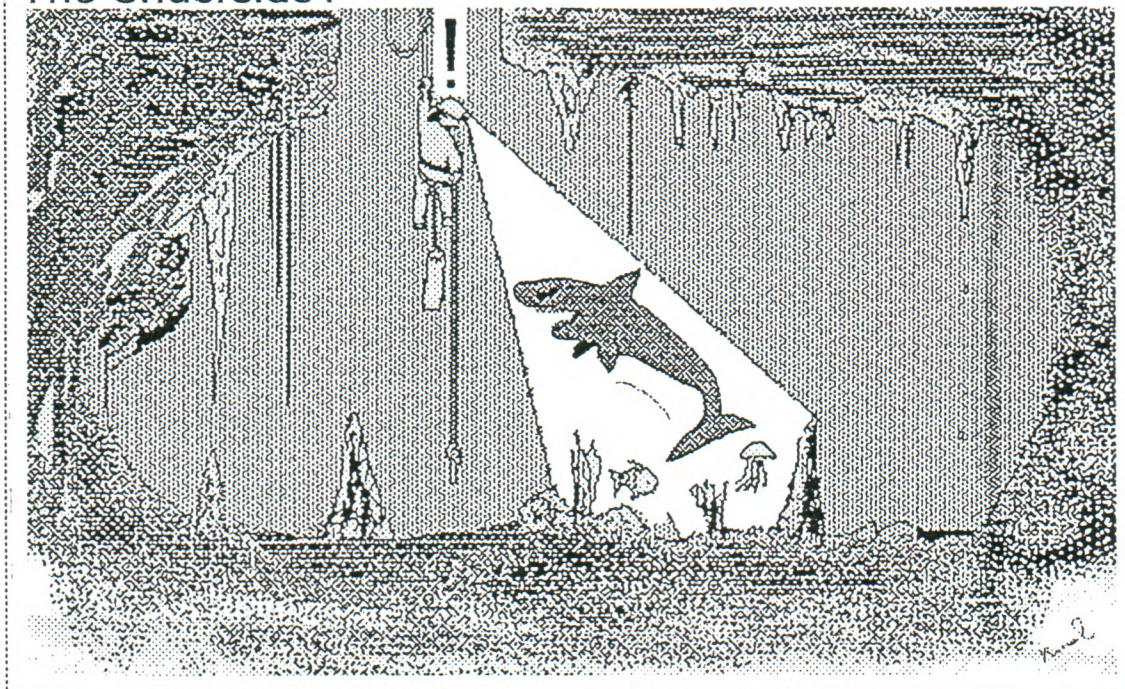


## More Rockpile

A warm welcome to **Vaughan Andrews**, our newest club member. Vaughan has been along on a few trips and has gone close to wearing his co-cavers out! We're working on some nice little projects for you Vaughan, something to slow you down a bit!

A temporary leave of absence to our beloved **Treasurer**, who has a six month stint of work in the northwest. We're sure to see the Bear around every now and then, but collaring him to go caving then may be quite difficult, he'll probably have other things on his mind! Thanks for keeping the books in such good shape Andrew.

### The Underside?



**A double take on IB162?** In Southern Caver #57 an article and survey of CHITON (Congenial Highway TO Nowhere), IB162 appeared. In SUSS Bulletin #34 I noticed a survey of IB162, but it wasn't the same cave SCS explored, tagged and surveyed. Evidently the cave that Mick Williams and Ian Cooper explored was only allocated the number IB162, but that particular number wasn't fixed. It is unclear what number tag, if any was affixed to the cave that Ian and Mick explored. Time, or more likely a visit to the cave in question to see what tag (if any) is there, will be needed to clear up this little problem.

**Surveying of the Western Passages of Exit Cave.** This work, as reported in Southern Caver #57 can now resume due to the arrival of a permit for 6 surveying trips into Exit. It is anticipated that three 'survey team days' will finalise the unfinished leads and about one or two trips will be used to 'ground truth' the drawn up survey and correct any deficiencies. [The TCC have received a similar allocation of trips for their proposed work in the Northwestern passages.]

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## CAVE LEADERSHIP ACCREDITATION

Tasmania, through work of the Department of Tourism, Sport and Recreation have been at the forefront of the Outdoor Accreditation field and have formed the Tasmanian Outdoor Leadership Council (TOLC), with branches in caving, bushwalking, rockclimbing and cross-country skiing, as well as a finger in canoeing. You may be aware of the formation of the Cave Leadership Accreditation Group (CLAG), which is a group composed of representatives from all the caving clubs in the state who are administering the caving branch of TOLC's activities. Accreditation for the different branches involves activity specific skills as well as common core skills. The accreditation certificates aren't a pushover, individuals will have to attain a high skill levels to be accredited.

CLAG has developed a two level caving accreditation scheme, in which Level 1 is basically a horizontal cave leaders qualification, whilst the much more technically demanding Level 2 qualification adds the vertical components. A working set of required competencies for the level 1 qualification have been developed. It is anticipated that all cave leadership training will be by self-study with trainees gaining their experience through caving with the existing caving clubs. CLAG, to complement this training may from time to time offer various training courses, on an 'as needed' basis. Also on an as needed basis, CLAG will offer assessment clinics for those individuals who are ready to have their skills assessed.

You may wonder what this has to do with you? In general, 'nothing' is the answer, as TOLC/CLAG have not been set up to control recreational caving as practiced within the caving clubs. It has chiefly been set up because there is a need for some formal accreditation for those people working in the educational (school trips) and commercial (adventure trips) arena. However, anyone from any of the caving clubs who may wish to seek accreditation is encouraged. Naturally there is provision for the recognition of prior learning and experienced caver who have the necessary skills may be 'fast-tracked' through the course on an assessment clinic. At some stage in the near future expressions of interest from those who wish to gain entry by this method will be sought.

To facilitate people gaining the necessary skills for accreditation in their field(s) of interest TOLC and the bodies in charge of the individual fields, eg. CLAG. will be running courses and/or assessment clinics this year for a suite of different subjects. Many pilot courses were run in 1994 and this has led to refinements of these. Participants will need some finance to be able to attend the various courses on offer, as they will cost. It should however, be noted that the courses on offer are very good value for money, are of a very high standard and are being run by professionals who are also very experienced outdoors people.

For your information a summary of courses being offered this year follows. Also, note that if you are considering accreditation for the level 1 Caving Certificate then of the courses on offer, you will need to successfully complete Remote Area First Aid, and Wilderness Emergency Management (ie. Search and Rescue). Further information about any of these courses can be obtained from:

Bruce Morley  
Department of Tourism, Sport and Recreation  
GPO Box 399  
Hobart 7001  
(phone (002) 308337, fax (002) 308333)

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**1995 TOLC COURSES****WILDERNESS EMERGENCY MANAGEMENT** (incorporating search & rescue)

Course 4 6-7 May

Course 5 7-8 October

\$105.00

**WEATHER INTERPRETATION**

Course 3 25-26 March

Course 4 23-24 September

\$105.00

**INSTRUCTIONAL SKILLS**

Course 1 13 May (southern)

Course 2 16 September (northern)

\$50.00

**CORE LEADERSHIP SKILLS**

Course 1 29 May-3 June

Course 2 25-30 September

\$500.00

**REMOTE AREA FIRST AID**

Course 5 28-30 March, 8-9 April (southern)

Course 6 13-15, 24-25 June (northwest)

Course 7 29-31 August, 9-10 September (northern)

Course 8 7-9, 18-19 November (southern)

Evenings only on Tuesdays, Wednesdays and Thursdays.

\$180.00

**RIVER CROSSING**

Course 2 date to be advised

Dean Morgan, Jeff Butt and Bruce Morley

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**snippets from the *Internet*****How risky is Caving?**

This is a summary of an article (lifted from somewhere else) that appeared on the Cavers electronic Forum earlier this year. The table below lists a dozen common activities and gives the both the number of accidents and fatalities per 100000 people per year.

Activity	Accidents per 100000 per year	Rank (accidents)	Fatalities per 100000 per year	Rank (fatalities)	Fatalities per accident
Commercial air travel	1	12	0.05	12	0.05
Bushwalking	50	10	0.5	11	0.01
Skiing	1440	4	2	10	0.001
Swimming	170	9	2.5	9	0.015
Caving	200	7	6	8	0.030
Rock Climbing	198	8	8	7	0.040
Boating	500	6	14.5	6	0.029
Automobiles	2100	3	19.1	5	0.009
Sky Diving	30	11	24	4	0.800
General mountaineering	602	5	146	3	0.243
Paragliding	5900	1	400	2	0.068
Mountaineering > 8000 m	5000	2	4000	1	0.800

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Not surprisingly, falling off tall mountains, or out of airplanes is not terribly forgiving. Of the lower risk (with respect to fatalities) activities skiing produces a large number of accidents. Caving compares favourably with rock climbing and swimming. It still seems that the drive to/from the cave is more of a worry than the caving trip! So, next time you're pushing the limits of wakefulness (having a thermos of hot coffee helps) when driving home after a long trip underground, take more care.

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## **Niggly Cave (JF237)-a description of two trips down fears, finds and the joys of tandem prussiking.**

Party: Rolan Eberhard, Jeff Butt

1/10/93 and 12/11/93

It was with some fear and trepidation that I accepted Rolan's offer of a trip down Niggly. Niggly is our deepest cave, 375 m and includes our longest pitch, a staggering 191 m! The thought of doing the big free-hanging pitch was pretty attractive and made even more so given that it was already rigged and we weren't derigging! Though I must admit that stories of the 'blood rushing' 30 m rift traverse with crumbling footholds and 85 m of space beneath made me feel somewhat hesitant. I reconciled with myself that I'd go and make a considered decision when I saw this obstacle face-to-face. If I didn't like it, I wouldn't do it!

So, on one of my Fridays off I ventured off with Rolan to meet Niggly. The walk in was all new country (for me), up the huge landslip near Lady Binney corner, through marvellous rainforest filled with interesting karst features. The steady uphill walk lasted for about an hour, with the final stages taking in a dry valley and a very impressive limestone canyon. At the end of the canyon was the contact, complete with a waterfall cascading over it and plunging into a hole; the Niggly entrance no less, we had arrived!

Trogged up, I bade farewell to the photon rich landscape and following Rolan ventured in. After the first 10 m pitch a small squeezey bit (bitey scalloped walls) made me gulp and wonder what I was in for. (This little obstacle is the last pain on the exit trip.) The Tiger Tooth passage (so named as projections from the narrow walls bite and snag at pack, light cord and trogsuit) seems to go on and on. It also forces a stoop much of the way, which adds to the torment. With steamed up glasses (the bane of the myopic bespectacled speleologist) I almost didn't notice the passage got easier, that is until two steps away was the 85 m pitch. I reversed a little, cleaned my specs and located the whereabouts of Rolan. Being able to see clearly is a great improvement and I follow Rolan along the rift above the 85 m void. It isn't too bad, sure there are a few crumbly bits and stones fall to oblivion, but with my chicken wings firmly emplaced I feel secure. As the traverse is progressed the quality of the walls decreases, but to compensate the floor rises up and we downclimb it to reach some ground. That's one big obstacle overcome and it'll be easier on the way out, I say to myself.

Next comes a series of three small pitches, each well rigged, with the spider principle (dubious rock, but lots of anchors) being employed on the second. After a smooth descent I feel quite composed and ready for the big one. But first there's a delicate little move around an arete to contend with. I notice a bolt on the wall, obviously others have used a safety rope here and for a good reason, the run out at the end of the slope is the 191 m pitch! At the pitch head Rolan installs a taunt backup trace between the two bolts to improve the safety for a tandem prussik out, and descends. After a while my ears strain against the background noise of a small waterfall nearby for the words "rope free". The

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water noise plays tricks on me and I imagine all sorts of calls. Eventually the shrill and distant call comes from below, now it is my turn.

I descend a few metres to the second bolt and with quite an effort haul up against the 20 kg rope weight to thread my Stop. With that done I'm off, but only slowly as I know there's a knot 90 m down. A krab to hold my stop open works well and as I rhythmically feed rope through I try to comprehend the vastness of this pitch. The walls bell out, so that the sides retreat and I feel very much like a spider hanging off the ceiling in the middle of lounge room. Time seems warped, it is hard to judge downward progress, but soon enough a knot looms up from beneath me and I find that the rope is getting thicker, so much so that 50 cm from it the 9 mm rope is about 13 mm thick and won't go through my descender. I'm a little concerned at the amount of sheath slippage. [The rope was brand new when rigged and there was substantial sheath slippage on the first use.] I change over to prussik mode and cross the knot okay to continue descent. The last 100 m is a wonderful, but somewhat bouncy abseil. I scan the blackness below for Rolan's light to get some sense of scale, what a huge place. After touching the floor another 10 m of rope runs through my descender as the rope relaxes, I'm off after 10-15 minutes of being alone.

What an immense place, it is vast indeed with a huge chamber containing a mountain (Mt. Niggly, no less) of rubble. Spaciousness gives way and gradually becomes rockfall. A stream appears around the lower boulders. Rolan deploys some charcoal bags (dye detectors) and we proceeded through the rockfall. After a couple of sporty little climbs we emerged into huge stream passage, typically the passage is 10 m wide by 10 m high, with a 4 m wide stream flowing between steep mud banks. This is the master stream for the valley, water from Growling Swallet (and Porcupine Pot, the dye bags would tell us). After an easy wander (about 1.5 km) downstream a second rockfall is traversed, then it is about another km to the 'final' rockfall. Several avens are passed en-route. We play around in the rockfall for half an hour, but without much joy before deciding to head out.

On the way out the stream is noticeably turbid and at our gauging rock about 3 cm higher. [A rise of about 40 to 50 cm would cut the route.] As we entered the cave it was very humid and thundery, so obviously there had been some heavy rain on the surface. It was a good time to be heading out. On the way back I missed the turnoff and found myself half way up Mt. Niggly before realising my error. Back at the rope I found Rolan patiently waiting for me. We geared up and when Rolan was 10 m up I attached myself to the rope. As I did so a few mental calculations were made, *{new 9 mm rope holds 1800 kg, a figure 9 knot at the top reduces the strength to 70% but we've got a double fisherman's in the middle which reduces the strength to 60%, a new rope when wet loses about 50% of its strength, the sheath on the top rope has slipped, so that means the rope should hold at least 540 kg, together with gear we are at most 180 kg.}* whew the rope will hold, but the safety factor of 3 isn't huge. Oops, my turn to prussik so mental thoughts were replaced by physical exertions.

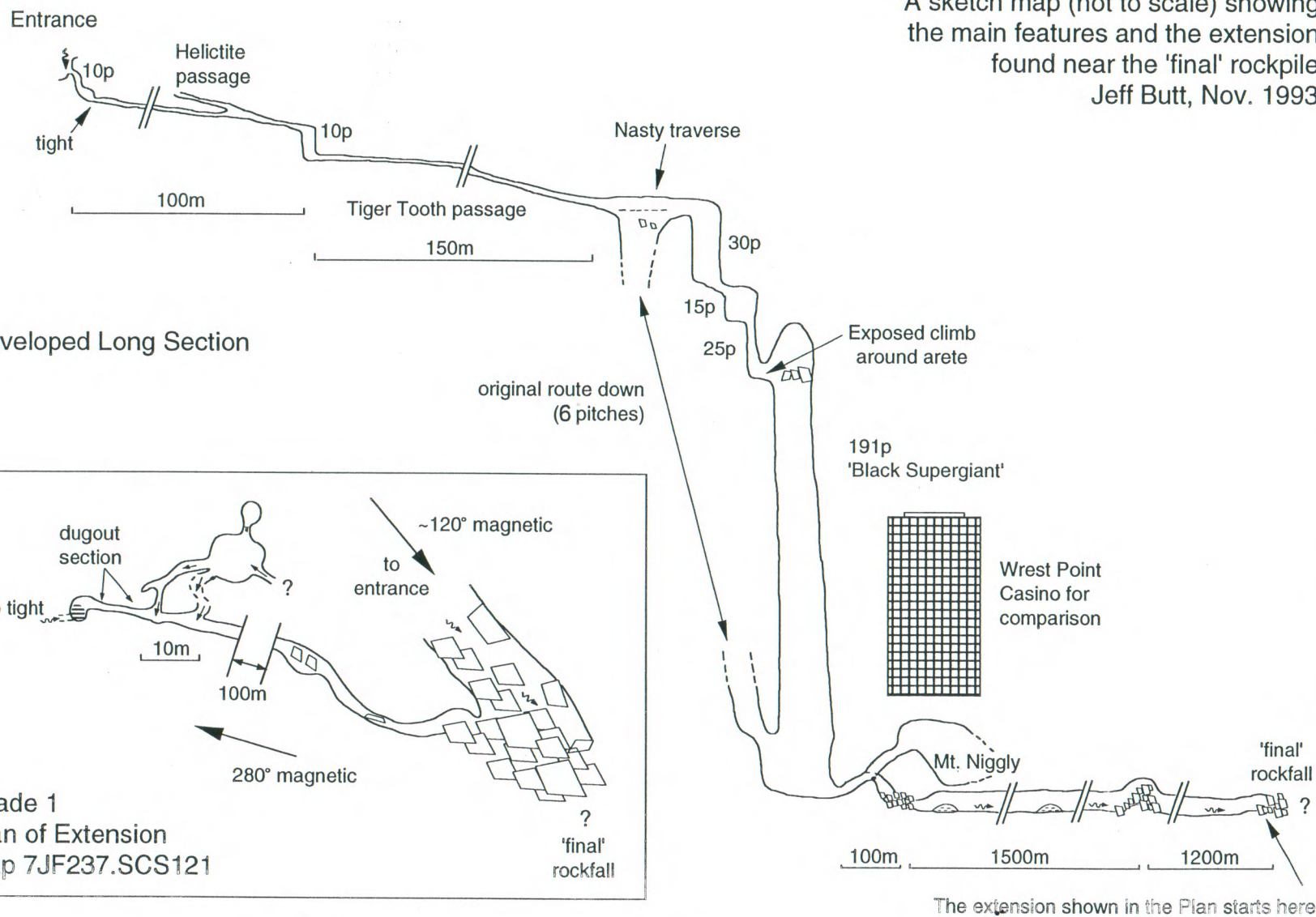
I'd never tandem prussiked before, it was a learning experience. The mental calculations above were the first lesson, ie. you have a reduced safety factor. There were many other lessons too, for a start a load of 200 kg takes all the bounce out of the rope. I prussiked up until my head hit Rolan's pack and as I waited for Rolan to move up the next cycle discovered that the second had to endure a rain of dirt and dust. [The first has a different set of problems, rope feeding isn't one! The weight of the second means that the rope you are prussiking on is more like a wire, which is trying to cut you in half. This necessitates a devious foot orientation to hold it at bay and stop the pain. Incidentally the foot placement helps to improve your vertical stance and makes one's legs do more of the work.] We soon got into a good rhythm, prussik, stop

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# Niggly Cave (JF237)

A sketch map (not to scale) showing the main features and the extension found near the 'final' rockpile.  
Jeff Butt, Nov. 1993.





and look around (let your arms dangle whilst resting and the blood flows back). As we progressed up the pitch the side walls (but not the ends, it is belled rift rather than a belled shaft) of this enormous cavity gradually come nearer. One boggles at how many years it took for the layers to be deposited on some ancient sea floor. I am sure the walls of this shaft would delight (and scare) many scientists for the sheer time section they represent. We chatted away en-route, tandeming is quite a social way to ascend. Reaching the halfway knot was a relief, the knot being a visible indicator of our progress. Thirty-five minutes after starting the ascent we were both off the rope. I couldn't believe how easy the ascent was, twenty-one sequential 9 m pitches are very easy to do, especially with a 90 second rest between each. Tandeming is very efficient, at all times there is someone making progress. With a single person on the rope, whenever a rest is taken there is no net progress. Incidentally singly it takes about 25-40 minutes to do this pitch.

With the big pitch ascended that's 3 out of 4 worries over. The traverse above the 85 m pitch went very smoothly and seemed a lot easier heading out (or maybe that's just cause it was the second time). The Tiger Tooth passage was a pain, glad we weren't toting huge gearbags of rope through it.

Nine hours after entering Niggly we exited. The trip went really well and was a lot easier and less worrying than I had feared. Still it is wise never to underestimate any caving trip and deep vertical caves deserve lots of respect!

For the few weeks after this trip my mind kept boggling at how big 191 m really is. Even in a car travelling at 100 km/hr it takes about seven seconds to cover this distance! I paced out 191 m several times, the best measure I found was Salamanca Place. The big pitch ('Black Supergiant') is the same length! Mind boggling indeed. It is merciful that the cave is dark, to me the exposure of 191 m in the dark is nowhere near even 50 m in the daylight.

Six weeks later Rolan and myself returned to collect the charcoal bags placed on the first trip. Niggly was now familiar ground and this made it much less intimidating. Two hours saw us at the bottom of the big pitch. It didn't take long to reach the terminal rockfall. Just prior to this rockfall we found a passage heading west (we were looking for a rockfall bypass route) and made about 100 m of ground till a dig. After a solid half hour of digging (lying with outstretch arms) I'd broken through, but the joy was short-lived and I was temporarily stuffed and had very tired arms. One shouldn't forget where one is, especially when at the bottom of the deepest cave in Australia! After a 30 minute recuperation period, a drink and a chocolate hit (whilst Rolan had another go at the rockfall) I felt okay and we headed out. We tandemed up the big pitch in just 30 minutes and this time round I learned the joys of being the first on the rope, no dust/dirt rain, but the 'cut-in-half' effect is very uncomfortable and one soon learns how to place ones foot sideways to stop the sawing action. However, by the time I'd reached the top the footloop on my fending-off foot had suffered from rope to rope abrasion and the footloop sheath had abraded through.

My progress through the remainder of the cave felt like I was operating in slow motion. The watch said 4 hours to get out and 10 hours in total. Again the entrance pitch was a lot wetter than on the way in, heavy rain must have fallen that afternoon.

For interest I've added a Grade 1 Developed Longitudinal Section of Niggly, together with a Grade 1 Plan of the passage found on the second trip. Together these should illustrate some of the notes above. Note that the sketch is not drawn to scale. I estimate that we found about 150-200 m of new passage.

I'm sure that there's lots to be found in this cave, but the arduous nature of the trip will be a bit of an impediment to this.

Jeff Butt

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## LILOS ON THE JANE RIVER-1994

(This is a heavily edited account of the trip, those who want more details should contact Russell)

Party: B.Morley, L.Andrews, R. Fulton, and O. Prall.

The Jane River is a major tributary of the Franklin River, its waters rising in the shadows of Frenchman's Cap and then flowing in a great circuitous route: easterly, southerly and finally westerly to meet the Franklin River some 7-8 kilometres below the Pig Trough. I had first heard of people travelling down the Jane River in the mid-1970's and some years later I shared a house for a short time with Ian Cattle, who had undertaken the trip in the summer of 1978/79 and who fired my imagination with stories of deep gorges, numerous caves and river banks lined with mature Huon pines, And so in January 1994, I found myself at the side of the Lyell Highway with three other people and heavy packs.

We crossed the rickety bridge which still stands (just!) across the Franklin River and headed south. The 24 km long Jane River track is still in pretty reasonable shape, but is not maintained and with very little annual traffic, it does not have a great future as an access track to this part of Tasmania. [Ed. The Jane River track is becoming a bit of a popular mountain bike trip.] It took a little over six hours to reach our campsite for the night, the edge of a buttongrass plain about two kilometres south of the bridge over the Erebus Rivulet and two or three kilometres short of the abandoned goldfields.

The next morning, we headed west across about a kilometre of buttongrass to meet the Erebus Rivulet near the base of Warnes Lookout. It is important not to start the river trip at the bridge where the Jane River track crosses the Erebus as a lot of time will be wasted with some serious log jams in the first few kilometres (Jim Taylor, pers. comm.). The dark, gurgling waters of the Erebus carried us quickly past banks lined with mossy, overhanging rainforest down to the broader waters of the Jane and lunch on a gravelly bank just downstream of the junction. Later that afternoon, the river flowed a little faster, the hills began to close in on either side and we knew we were approaching the first gorge "Enkidu". We pulled over to the left bank at a suitable spot and made camp. That night, I was somewhat surprised to find that although Bruce (the trip instigator) had spoken to someone who had done the trip the previous summer, the sum total of his route notes, which I somehow imagined as detailed (like Franklin River rafter notes), were written on one page of a tiny notebook. For example, the first gorge was described thus: "Enkidu-takes most of the day."!! This was one of four entries and probably the most descriptive! Bruce's rationale was that it would be a pity to take away the element of the great unknown. He was right.

Sunday morning dawned fine and we were soon at the entrance of Enkidu Gorge, marked by the spectacular disappearance of the river beneath gigantic boulders. And so began some long portages past thundering rapids, interspersed with occasional sections of calmer, navigable waters. The gorge took us about nine hours, a solid day. Our campsite, that night, at Algonkian Rivulet was on the edge of a vast amount of carbonate rock which extends for many kilometres to the south, down the valley of the very isolated Maxwell River. Apart from the archaeological activities of Parks, Wildlife and Heritage this area has received very few, if any European visitors. Immediately adjacent to the Jane River however, several parties have explored some of the numerous, tiny lakes which occupy dolines, but no caves have been reported (Gee, 1976; Cattle, 1979). Although we had intended to visit these, our trip start had been delayed a day and we did not want to spend a day off the river so early in the trip.

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The river passes through the Norway Range about one kilometre downstream of Algonkian Rivulet and out onto a broad, limestone plain devoid of rainforest, having been burnt nearly fifty years ago (see Gee, 1976). Although designated as a Precambrian dolomite on the geology map, the blue-grey colour and bedding character suggest that it is more likely to be a part of the Ordovician Gordon Limestone. There is little topographic relief near the river and the prospects for extensive cave systems would seem to be low. There are, however, many interesting river level entrances, a number of which have been investigated previously (Cantle, 1979). It is possible that where the river approaches the eastern edge of the Surveyor Range, the limestone may extend far enough up the slope to create an environment more suitable for substantial cave development, but then again it may not.

The next day we paddled around Punt Hill and then into the second gorge on the Jane, "Gilgamesh". This required much portaging and is the deepest and most spectacularly rugged gorge on the river. We saw no evidence of carbonate rock in the gorge and suggest that the caves referred to by Gee (1976) and commented on by Middleton (1979) are possibly features carved into and through the schists and quartzites by the sheer force and volume of water in the heart of the gorge. A short paddle down a few kilometres between forest-clad banks brought us to a large limestone bluff lined pool at a bend in the river, just a hundred metres or so upstream from where a magnificent view could be obtained of a very high cascade (unmarked on the map) which drops off White Hill Plain and down to the Jane. This was our campsite for the night.

The next day we passed through the final gorge on the Jane, "Humbaba". From our campsite to the start of the gorge there are extensive limestone deposits (unmarked on the geology map) and numerous cave entrances. These offer perhaps the best prospects for cave exploration on the Jane River, many entrances having been previously investigated (Cantle, 1979). This area could be accessed from the Franklin River relatively easily. Humbaba gorge has a very different feel compared to the other two major gorges on the Jane. Here, the gorge has been cut into mostly shallowly dipping Silurian sediments (sandstone-siltstone), rather than the older Precambrian-Cambrian, metamorphosed quartzites and schists of Gilgamesh and Enkidu. Humbaba is a series of rapids connected by calmer water and, at one spot, by a very large, beautiful pool. Lovely rainforest hangs over both the river's banks and the moss-covered cliffs above, creating a quite beautiful setting. The gorge was negotiated without the need to deflate lilos and involved a few easy portages beside the river, short paddles and the occasional crossing from one side to the other. We were never long out of the water and so the heat of the day was kept at bay (this was the day of 37°C in Hobart). It took us only about 2.5 hours to negotiate the gorge after which we returned to limestone country and shortly thereafter reached the confluence of the waters of the Jane and the Franklin.

The lower Franklin is a magnificent area, with wide, shingly rapids; long flat stretches; numerous limestone bluffs; impressive cave entrances and great forest. My personal highlights were the Galleon Bluff area, the Verandah Cliffs, the area around F-38 (Tear Drop Cavern?) and both the waterfalls: Double and Big falls, both obligatory portages on lilos. What a crime it would have been to flood these areas!!

The final kilometres down the Franklin and then the Gordon were passed very quickly, thanks in large part to the HEC who had released enough freezing water into the Gordon to have it running a banker (possibility not for our benefit, though!). We had a couple of exciting minutes being swept along on an ever-changing, mobile patchwork of eddies and water mushrooms, from the Gordon and Franklin junction to the final rapid at The Big Eddy. It seemed a little ridiculous to be on lilos which by now were all leaking so badly that regular 20-30

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minutely stops had to be made to reinflate. We all survived however and at lunchtime almost six days to the hour after gently floating off down Erebus Rivulet we climbed out of the river at St. Johns Falls jetty and waited for the seaplane to take us away.

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Middleton, G. J. 1979. Wilderness caves of the Gordon-Franklin river system. Environmental Studies Occasional Paper 11; Board of Environmental Studies, University of Tasmania.

Russell Fulton

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COMING IN **SOUTHERN CAVER, Number 59**, planned for May 1995!

Articles include:

- the history and survey of Rift Cave (JF34),
- the survey of Udensala (JF232),
- Problem Pot/Burning down the House (JF402)-the real story, including discovery of a connection to JF228 and the complete survey,
- Sump Pot (JF234),
- an update of work on Threefortyone (JF341) at the Niagara Pot end,
- Internet-the recent features and more.

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## Welcome Stranger (JF229)

Believe it or not, the survey of this much visited, well known and decorated horizontal cave has never been published, so to make amends here it is. The Stranger was no stranger to SCS in the '70's with trips there every second weekend. Apparently the story goes that there were many a change of plans, whereby once the ANM gate was passed, the venue of the intended trip would be altered from a wet grotty pothole like Niagara Pot to Welcome Stranger. There may have been a hangover of this line of thought into the 80's too, as it was in 1983 that Philip Jackson et. al. surveyed Welcome Stranger. The plan of the 1650 m long cave follows.

Over recent times it became apparent that Welcome Stranger was receiving quite a lot of use, often by unwelcome visitors. Some damage has occurred to formations and to prevent the continuation of non-caver trips to this cave the Forestry Commission has gated the cave, the gate being placed at the bottom of a downclimb in the daylight zone of the upper entrance. The streamway crawl entrance has been barred. The key is available to bona-fide members of the recognised caving clubs. The official procedure is to apply in writing (to the District Forestry Office, Patrick Street, Hobart) well in advance of the intended visit. (In practise it is possible to turn up at the front desk for the key.) You will be required to pay a \$50.00 deposit for the key, this quite effectively ensures that the key is not mislaid. The deposit is refunded when the key and a brief trip report are furnished.

Jeff

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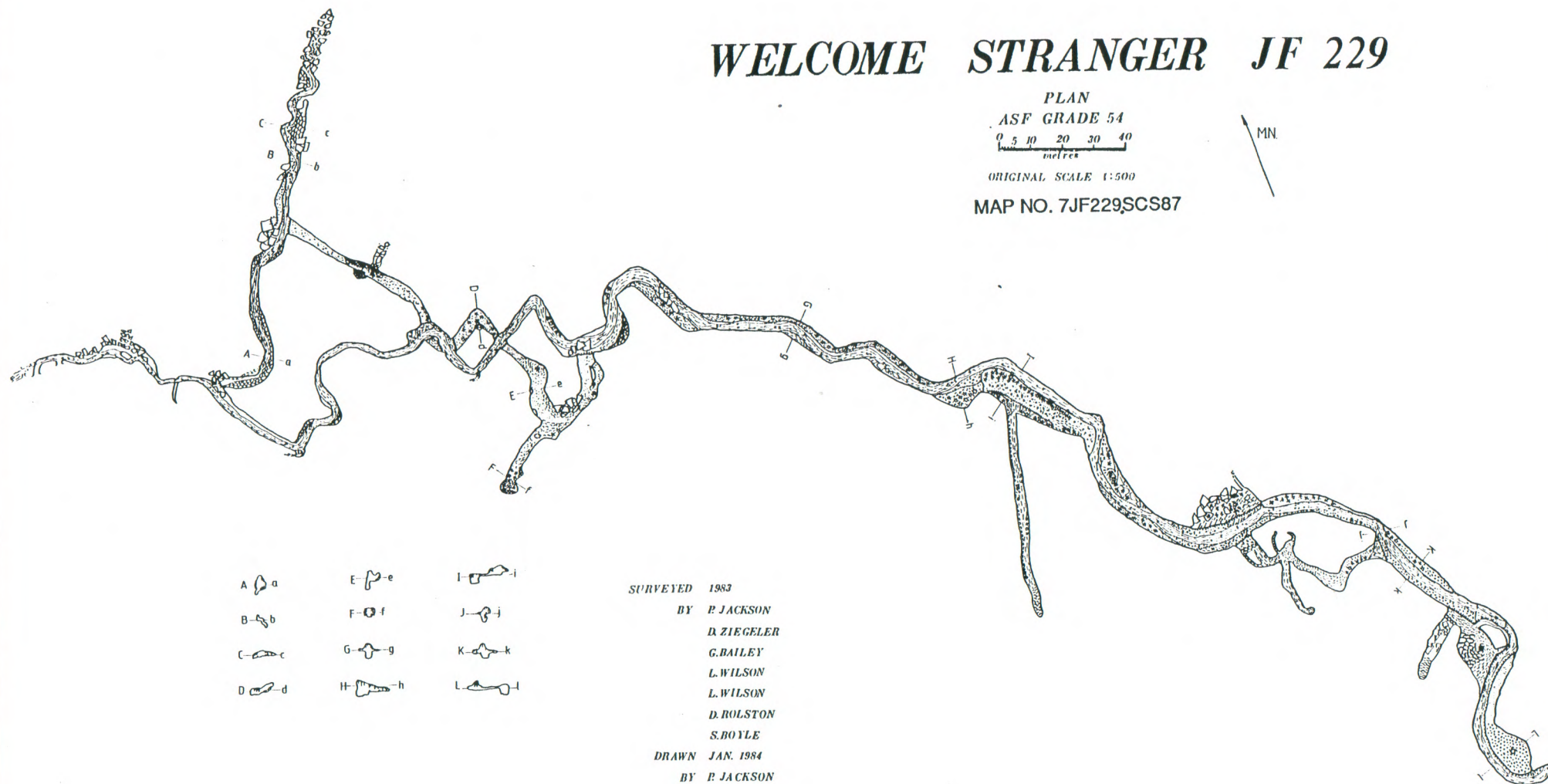
# WELCOME STRANGER JF 229

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ORIGINAL SCALE 1:500

MAP NO. 7JF229SCS87

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