

*S
O
U
T
H
E
R
N*

C A V E R

*NUMBER 59
AUGUST '95*

SOUTHERN CAVER

Number 59

August 1995

ISSN 0157-8464

Price \$4.00

Published by the

SOUTHERN CAVING SOCIETY
P.O. BOX 121, MOONAH 7009

OFFICE HOLDERS

President	Jeff Butt	238620 (H)	325302 (W)
Vice President	Dean Morgan	279318 (H)	345061 (W)
Treasurer	Andrew McNeill	252063 (H)	207446 (W)
Secretary	Mark Doyle	235389 (H)	202788 (W)
Quartermasters	Sarah Boyle/Jeff Butt		
Editors	Andrew McNeill/Jeff Butt/Vaughan Andrews		

MEETINGS

Informal gatherings are held on the first and third Wednesdays of each month at the Shipwright Arms Hotel, 29 Trumpeter Street Battery Point, from 8 p.m. Starting in October '95, additional meetings will be held on the second and fourth Wednesdays of each month at the clubroom, 22 Clutha Place, South Hobart. Visitors are welcome. Further information can be obtained from the office bearers, as listed above.

CONTENTS

Editorial	2
Coming Events	2
Area Reports: 1 July 1994-30 June 1995	3
<i>The Rockpile</i>	3
An update of surveying in the Western Passages of Exit Cave	5
Rift Cave (JF34), the completed survey and some notes about the cave	5
Food for thought, or thoughts about food for heat!	6
Recent discoveries in Niggly and Sesame Caves in the Juneee-Florentine Karst	7
A Basic Bushbash	13
The top 10 (longest and deepest) caves in Tasmania-an update	15
Minimal Impact Caving Tips	15
Cave Leadership Accreditation Group-what's on	16
Gear Tips	16
Udensala (JF232)	17
Recharging dry cell batteries-does it work and is it worth doing?	20
Aeolian Calcarentie Karst at High Rocky Point, West Coast of Tasmania	21
Snippets from <i>Cavers Digest</i> on the Internet	22
ASF Minimal Impact Caving Code-1995	24
ASF Code of Ethics	27
SCS Contact List	29
CLASSIFIEDS	29
SCS Warehouse Sales	30

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

Cover Photo:

Shawls in Kubla Khan (MC1-MC29).

Jeff Butt

EDITORIAL

Yes, it has been wet down here in Tassie. Earlier in the month there was a huge amount of snow around and the skiers were happy. Then all of a sudden we have had a deluge of rain, temperatures are up and the Spring thaw is well and truly here. As a result conditions underground are somewhat cold and wet-the perfect time for some editing!

By the way, thanks for all the positive feedback about the last issue of Southern Caver (Number 58, in January '95). I hope you all enjoy this issue just as much!

Judging by the frequency of caving light hires over the last six months there's currently a small recreational caving boom. Hopefully this will translate into an increased interest in caving as an interesting and rewarding outdoor pursuit rather than just an activity to be tried once. Certainly caving clubs in the state, will benefit by a continued influx of new blood.

Clubs should also benefit from accreditation requirements slowly being placed on those who act as guides for schools and institutions in that these people will need to have a reasonable amount of caving under their belts in order to get their skill levels and competencies up. Presumably an active association with the local clubs will be the best way for them to achieve this. Hopefully these people will stick once they've made the grade! Whilst these accreditation requirements are not directed at the clubs directly they will have some impact upon us. With a sensible attitude these impacts should only be positive.

And changing topics yet again, it is amazing at how rapidly caving/speleology on the electronic ether (alias the World Wide Web, or WWW) is expanding. Any day now I wouldn't be surprised to see a daily caving conditions page giving cave temperatures and stream flows at the click of a mouse. One really wonders where it will all stop? The only worry I have is that 'surfing' might actually replace going caving! But on the other hand, by becoming soft computer crazed beings, we are minimising our impact on the caves.

Jeff

COMING EVENTS-For your diaries

September 1st is the deadline for returning Comments about the Ida Bay Management Plan to Ian Houshold at Parks and Wildlife. Have you had your say?? There is still time, do it today!

SCS is invited to the TCC Annual Dinner-7 p.m. Friday October 6th. Come along and socialize over a good feed at the Kingston Cottage Restaurant (39 Beach Rd, Kingston). The damage is \$20 per head plus what drinks you buy (i.e. it's licensed). Please RSVP to Stuart Nicholas (002) 283054 by the end of Sept.

Wednesday, October 10th-from 8 pm. Inaugural meeting in the new SCS clubroom (22 Clutha Place, South Hobart). Snacks and nibbles supplied, BYOG.

CLAG CAVE SAFETY 1 WORKSHOP-Sunday October 22nd.

CLAG CAVING LEADER 1 ASSESSMENT WEEKEND-Sat/Sun November 4/5.

For further details about CLAG and these activities, see page 16 in this Southern Caver.

RELIABLE LIGHTS for HIRE. CHEAP GEAR for SALE-see the BACK PAGE!

AREA REPORTS: 1 July 1994-30 June 1995

In this period there were a modest 26 trips recorded in the Club Minutes book, this is a somewhat smaller number than normal for a 12 month period and seems to reflect the recent loss of some old hands and the non-caving busyness of others.

On an area by area basis trips and highlights of work were:

JUNEE-FLORENTINE-10 trips: 3 to JF341/Rift, 2 to Niagara Pot, 1 to Burning Down the House and Welcome Stranger and 3 surface trogging trips.

Surveying work at the northwestern reaches of the Threefortyone system has been finished and we have pushed the cave to within 50m of Niagara Pot. Very wet conditions in Niagara Pot have made work difficult in this region, but some progress has been made.

IDA BAY-10 trips, 2 to Exit surveying in the Western Passages, 2 each to Mini Martin, Skyhook Pot and Midnight Hole, 1 to Mystery Creek and 1 to Milk Run.

The gathering of survey data in the Western Passages of Exit was completed and soon we will be ready to tackle another portion of Exit. The very spectacular Mini-Martin Skyhook Pot exchange trip was done twice.

HASTINGS-3 trips to Wolf Hole. Wolf Hole has become a bit of a popular training cave of late.

MOLE CREEK-just one trip involving one member to White Rabbit.

OTHER-one trip to a 'semi-wild' cave interstate and involvement by members in a Search of Mystery Creek for a missing Person (subsequently found alive and well on the surface).

Andrew McNeill

The Rockpile

Recent SCS happenings

The gear store and archives are now at Jeff and Sarah's (22 Clutha Place, South Hobart), happily residing in their own 30m² clubroom. It has been a long, long time since all the SCS assets have been at a single location, not since the halcyon days of the sandstone room out the back of an establishment in Davey Street! Hopefully this represents another stable period in the history of the Society, one in which we won't be continually looking for a home.

The plan is to use the new clubroom for meetings and workshops on the 2nd and 4th Wednesdays of each month, commencing on October 10th. This will provide a non-hotel venue (but of course, everyone is welcome to BYO) and should even allow some useful projects, workshops and other activities to happen. Planned activities will still be advertised on a regular basis in editions of the SCS Newsy Bits. Social gatherings will still be at Shippies on the 1st and 3rd Wednesdays of each month to foster interchange with members of the TCC.

SCS back to the ASF fold

SCS has also now rejoined ASF as a fully paid up member. Financial members now have their caving activities covered by ASF Public Liability Insurance.

YOU can SUBSCRIBE to the SOUTHERN CAVER for \$4 per issue, post paid!

New Karst Atlas

I believe that the first (of two?) volume of a Tasmanian Karst Atlas by Kevin Kiernan is now at the printers and due out in September. It describes something like 400 different karst areas in the state and there'll be something in there for everyone. One wonders whether Kevin (a SCS member for many years) will reveal all of the "point X's" he has taunted us with over the years.

Tiata Mara Kominya=a new name for an old cave

Beginners Luck (JF79, 80, 81 and 82) now has an aboriginal name. A draft copy of a 40 page management plan for this cave was released earlier in the year and is available in the club library for anyone who is interested.

Draining Popular

In the Autumn '95 Adult Education supplement, "Underground Hobart" a trip visiting the drains of Hobart (to be conducted by the Hobart City Council) was the most popular course. A ridiculous number of people signed up for it (even one caver), but unfortunately due to problems with insurance no-one got to go, through the motions. It seems that everyone insists on CYA (cover your bottom) these days! [Sounds like there are plenty of potential cavers out there! Ed.]

A new deepest cave in the Southern Hemisphere, 1141 m

Via the Cavers Digest we now know that a cave (Muruk) in the Nakanai mountain jungle of Pomio, in East New Britain has reached the heady depths of 1141 m. Muruk was discovered in 1985 and a French diving team were doing a lot of diving work at about 600 m earlier in the year. However, I'm not sure which group of people achieved this new depth record. Getting to the bottom is no easy feat either, it involves 1600 m of rope and diving gear!

What a prussik, just 0.5 km in one go!!

If you thought prussiking the 191 m pitch in Niggly would be a challenge, then what would you think about a **501 m** pitch in a cave by the name of Jama in Slovenia. This shaft has no ledges and from top to bottom is only 20 m out of vertical. Apparently there are a few huge snow gathering chockstones at 350 m down (handy to indicate some progress!) and at the base of this ice covered shaft is a strong draft. Four caves nearby exceed 1000 m in depth and the depth potential for the area is 1700 m. No wonder Slovenia seems to be the place to go caving at the moment.

It's a small world

For a reason that now escapes me I happened to electronically converse with an X-British caver who was working in Germany. Mark asks "do you happen to know of a caver working as a Mining Engineer, who also worked with Landrover in the UK before emigrated to Australia some years ago? I'd like to catch up with him." Sure do, it could be none other than Frank Salt. Address and phone number were duly sent and no doubt some reminiscing about old times and hangovers has occurred.

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

Yes it is possible to subscribe to this approximately biannual magazine. For just \$4.00 [\$5.00 overseas] 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 [4 overseas] issues), or buy/inquire about back issues, please drop us a line with your cheque.

RELIABLE LIGHTS for HIRE. CHEAP GEAR for SALE-see the BACK PAGE!

An update of surveying in the Western Passages of Exit Cave.

Jeff Butt

In Southern Caver 57, May '94 I estimated that the survey work in the region was then 95% complete with some 2.6 km surveyed. Foolish words, no doubt! After several more trips work in the region is essentially complete with all accessible leads having been exhausted. The total survey length tallies 3728 m, shot over 408 legs. All that remains is the not so small task of drafting up a finished product. And Yes, it will happen in due course. It is quite interesting to see just how much passage a thorough survey yields. I am quite convinced that when Exit is surveyed completely it will be something approaching 50 km in length and once again officially be Australia's longest cave!

[Currently the three longest caves in the country goes something like:

Berks Backyard (NT)) about 29 km

Old Homestead (Nullabor) about 28 km

Jenolan system (NSW) twenty-something km

and Exit is variously quoted at figures in the 19 to 23 km range.]

Rift Cave (JF34), the completed survey and some notes about the cave.

Jeff Butt

A little contemporary history.

Rift cave (JF34) has a large gaping rift type of entrance which takes off from a huge doline carrying a sizable stream. At times in the past a lot of water must have gone down Rift Cave. The cave essentially consists of a huge passage ("Railway Tunnel") which barrels on down at a steady inclination of about 30-35°, but then unexpectedly terminates. The water is lost through the floor en-route down. A comprehensive survey was made by Phil Jackson and others in 1982, the survey being published in Southern Caver 51, December 1982. This showed that Rift Cave attained a depth of about 130 m and had a modest length of about 250 m. The way the cave terminated always seemed unsatisfactory and there were always rumors of draughts in the vicinity of the bottom.

In March 1988 a significant extension, from a small side passage just out of the daylight zone was found as reported in Southern Caver 55, March 1989. This new portion of cave (dubbed the "Silver Lining") was duly explored and surveyed, resulting in a new depth of about 181 m and a length of approximately 1150 m. A Plan was duly drawn up on paper (at 1:200), but never quite made it to inked completion, that is until now (see the A3 fold-out overleaf). Of course with the recent connection of Rift Cave to Three-forty-one, as described in Southern Caver 58, Jan 1995 this survey is itself out of date. However, since it is safely stored as bits and bytes on several magnetic media it will be readily incorporated into the survey of the Three-forty-one system.

The Silver Lining extension does give access to much of the Rift streamway, but again this water is lost through the floor en-route down. In times of high flow the over-flow water can be followed all the way to the lowest point. Even on the Three-forty-one side of Rift the main Rift water cannot be found, at best one can pick up the Rift overflow water (i.e. water from Rift Cave when the flows are high) in two places, one leading from the Railway Tunnel region and the other from the lower reaches of Silver Lining. Interestingly one major passage from

YOU can SUBSCRIBE to the SOUTHERN CAVER for \$4 per issue, post paid!

Three-forty-one lies underneath the Railway Tunnel, and at it's highest point is an estimated 8 m below the floor (about half way down the Railway Tunnel).

Rift cave itself is a remarkably easy cave, with only one 16 m pitch (Silver Lining), requiring about 30 m of rope, to be negotiated en-route to a reasonable depth. Once out of the serpentine stream passage leading to the Silver Lining pitch (which can be quite wet, despite the two bolts (one either side) being placed well out into space) one basically ambles down (with a few small down-climbs) a steady slope of about 30-35° (watch the easily loosed dolerite cobbles/boulders), with the passage growing to very large dimensions. The lower reaches of the cave are quite complex with lots of phreatic development, blind shafts, a few sandy passages and plenty of infill which chokes everything out. The connection to Three-forty-one was first made from the Three-forty-one side, with a 12 m pitch landing you at the bottom of Rift Cave.

A Plan of the completed survey follows. Four relocatable survey stations have been identified, namely the JF34 tag, the left-hand bolt at the Silver Lining Pitch and two prominent rocks, one in each branch of the lower portion of the Silver Lining extension. In addition several other semi-permanent survey markers (red flagging tape with station information) can be found at various places within the cave.

Food for thought, or thoughts about food for heat!

From experience we've all probably learned that certain foods are better than others for keeping one warm whilst caving. From those in the human nutrition field we can learn a little about the "whys". The following table shows some information about the different food groups. The energy content is the amount of calories in the food. The thermic efficiency represents the amount of heat produced whilst digesting the different foods, noting that different amounts of water are needed to deal with different foods. The duration represents the length of time the different food groups effectively last; we know fat hangs on!

Food group	Energy content	Thermic efficiency	Duration
Proteins (meat/fish/cheese)	4 kcal/gm	20%	6 hours
Sugars & carbohydrates (sugar/grains/potatoes/pasta)	4 kcal/gm	10-13%	2.5 hours (peaks after 1 hour)
Fats (butter/oils)	9 kcal/gm	7-8%	longer

Using this information, nutritionists suggest that the ideal food for keeping warm should be about 60% carbohydrates/sugars, 30% protein and 10% fat. Food combinations that fit in well with this are:

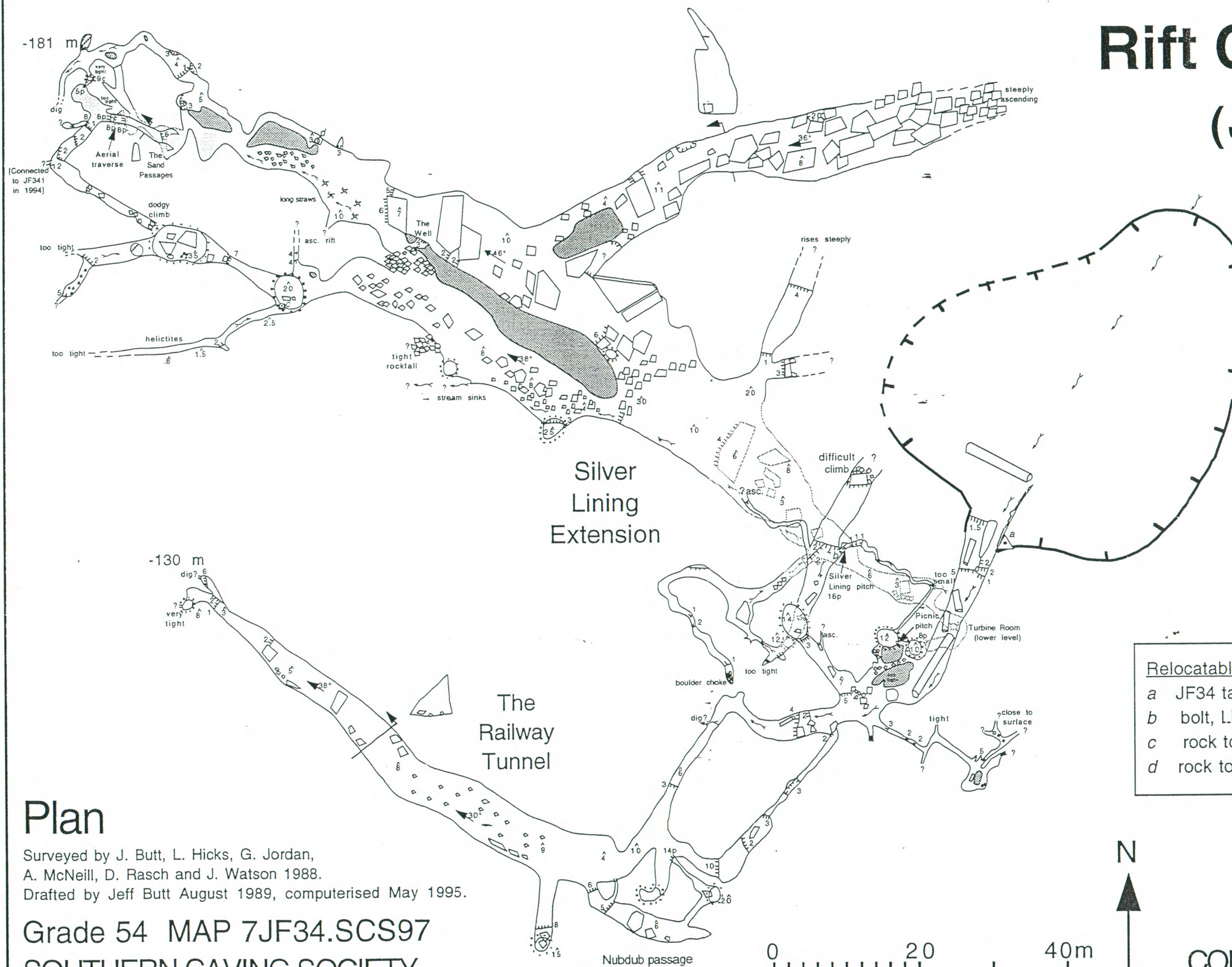
- peanut butter and jam/honey sandwiches,
- tuna (in oil) sandwiches,
- chocolate, especially dark chocolate.

No surprises here, they are the foods that many enjoy underground. A Canadian Cold Buster (CCB, a super-duper heat producing bar) is close to this ideal constitution. There is a naturally occurring substance called theobromine in cocoa, this is an important ingredient in the CCB. You need lots of cocoa to get the ideal amount of theobromine, so the darker the chocolate the better.

JB

RELIABLE LIGHTS for HIRE. CHEAP GEAR for SALE-see the BACK PAGE!

Rift Cave (JF34)



Plan

Surveyed by J. Butt, L. Hicks, G. Jordan,
A. McNeill, D. Rasch and J. Watson 1988.
Drafted by Jeff Butt August 1989, computerised May 1995.

Grade 54 MAP 7JF34.SCS97
SOUTHERN CAVING SOCIETY



COPYRIGHT

Recent Discoveries in Niggly and Sesame Caves, Junee-Florentine Karst

Rolan Eberhard

Niggly Cave and Sesame Cave are located on the southwestern slopes of Florentine Peak in the extensive Junee-Florentine karst. Both caves form part of a complex karst conduit network linked to the Junee Cave outflow near Maydena. Recent discoveries in these two caves add significantly to our knowledge of cave development and hydrology in the Junee River catchment, and support the notion of a "Junee Master Cave" which has fueled exploratory activity by cavers in this area for several decades now.

Deep Caves	Depth (m)	Long Caves	Length (m)
Niggly Cave	375	Growling Swallet	12000*
Ice Tube-Growling Swallet	360	Threefortyone-Rift Cave	9000*
Khazad-Dum	333	Niggly Cave	3400
Cauldron Pot	305	Serendipity	2948
Serendipity	278	Porcupine Pot	2531
Rift Cave-Threefortyone	249	Khazad-Dum	1774
Tassy Pot	238	Welcome Stranger	1650
Owl Pot	225	Sesame Cave	1300*
Niagara Pot	222	The Chairman	1216*
Sesame	207*	Burning Down The House	1200
Flick Mints Hole	204	Cauldron Pot	1071
Porcupine Pot	202	Frankcombe Cave	900
The Chairman	197	Tassy Pot	854
Peanut Brittle Pot	186*	Owl Pot	786
Udensala	181	Junee Cave	775

Table 1

Some deep and long caves in the Junee-Florentine karst. An asterisk indicates that the depth or length figure is approximate. Generally, this means that the length or depth has been estimated rather than accurately surveyed, although it may also imply that the figure is a minimum based on an incomplete cave survey. The depth of Growling Swallet, previously thought to be 375 m deep, has been amended on the basis of new survey data.

Niggly Cave (JF237)

The exploration of Niggly Cave resulted in a new Australian depth record of 375 m in mid 1990. Niggly contains numerous vertical shafts (see Table 2 for pitch details) including the spectacular 191 m long Black Supergiant Shaft which drops into a massive rockfall chamber known as Mount Niggly Chamber. This chamber was the limit of exploration until August 1993 when Stefan Eberhard and Vera Wong discovered a route through rockfall at its southeastern end. On this trip, Stefan and Vera negotiated several hundred metres of complex rockfall to emerge into a major new streamway. The original aim of their visit had been to test the possibility that a stream which was already known to exist in rockfall at a low point in the Mount Niggly Chamber, represented water from Growling Swallet. The closest surveyed points in these two caves being some 500 m apart, although their entrances are separated by a major surface drainage divide

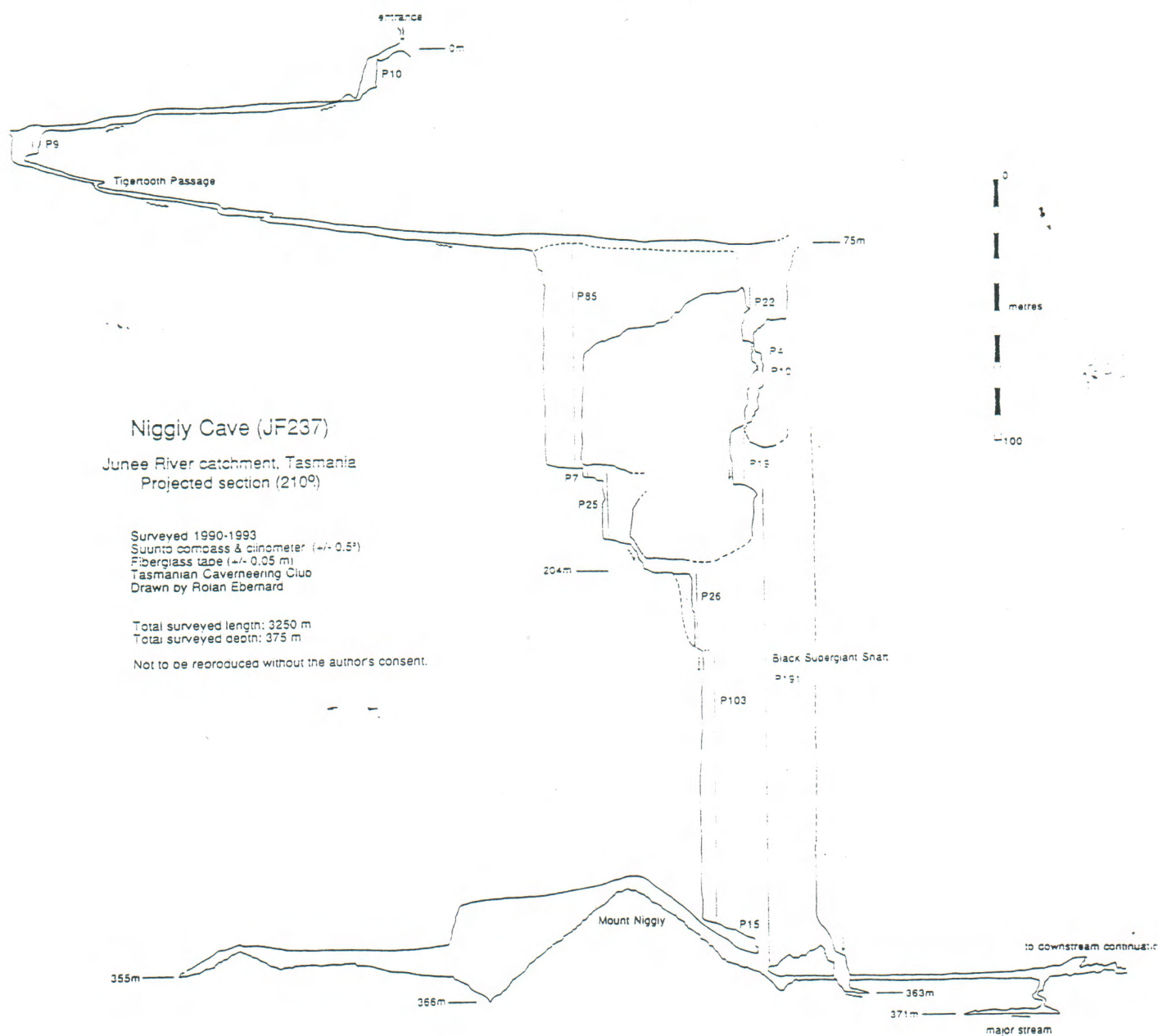
YOU can SUBSCRIBE to the SOUTHERN CAVER for \$4 per issue, post paid!

and a linear distance of about 2 km. I had inserted Rhodamine WT dye into Growling Swallet early on the same day that Stefan and Vera descended Niggly Cave - they were able to confirm the presence of dye at visibly detectable concentrations in the new streamway less than 10.2 hours later. This was an exciting discovery as it indicated that a way into the conduit system between Growling Swallet (the largest single streamsink in the Junee River catchment) and Junee Cave (the principal resurgence), had been entered. Both of these caves are blocked by sumps which have so far prevented exploration of intervening passages.

Pitch	Length (m)	Rigging Possibilities
1	10	Natural anchors (threads); bolt on right 4 m down; potentially wet.
2	9	Natural anchors (bollards); extra 7 m of rope useful for step below.
3A	85	Traverse out to flowstone bridge; natural anchors (bollards); redirection part-way down.
4A	7	Traverse out on left wall to bolt at chest height.
5A	25	Climb up in rift before pitch; bolt on left at small "window".
6A	26	Abseil a few metres to a bolt on the opposite wall.
7A	103	Exposed traverse on right wall; bolt on opposite wall at narrow point above shaft; free hanging Y-hang possible with tapes over dodgy flowstone bollard on right; allow an extra 15 m of rope for the traverse.
8A	15	Natural anchors (bollards?).
9	8	Natural anchors (boulders).
3B	22	Exposed traverse along rift beyond top of P3A followed by climb down to top of P3B; bolt on left wall backed-up with angle pitons (right wall); abseil chossy slope to bolt about 8 m down.
4B	4	Natural anchors (bollards).
5B	10	Continuation of P4B; Y-hang possible with bolt and bollard.
6B	19	Natural anchors (bollards); redirect with thread about 5 m down.
7B	191	"Black Supergiant"; exposed rising traverse on right leads to good rigging point (some trips have rigged a handline at this point; 15 m of rope would suffice; bolt on right near start); back-up to massive boulders; bolt on left wall; bolt at lip about 6 m down; free hanging below 2nd bolt.

Table 2

Pitch lengths and rigging details as adopted during recent trips to Niggly Cave. The cave comprises parallel shaft series (A, B) which join at the Mount Niggly Chamber. It is not necessary to descend P9 to reach the deepest point. Left and right are given facing downstream. Bolts are 8 mm self-drilling anchors (spits); plastic bolts have been screwed into the anchors to aid in their preservation between trips, as well as making them easier to relocate; hangers are required.



Vera, Stefan and I returned a couple of days later to continue exploring and commence a survey of the new passages in Niggly Cave. We found that the streamway continued for many hundreds of metres beyond the farthest point reached on the previous trip, maintaining its spacious dimensions and following a south easterly course. In excess of 1 km of new passage, much of it similar in scale to parts of Exit Cave, was surveyed and explored on this trip. Out turn-around point was a large rockfall chamber which largely blocked the streamway. Climbing up onto the rockfall revealed a hole leading back down to the stream about 30 m below, a quick recce revealing that the big streamway continued beyond. This promising lead was left for the next trip.

Several weeks later, Stefan returned with Judy Clarke. A mere 200 m beyond the rockfall where we had previously halted they encountered a further and more serious rockfall blockage. Despite pushing various leads, no obvious way through was found.

In late 1993 and early 1994, Niggly Cave was descended several times, principally to conduct further water tracing experiments. On two of these trips, Jeff Butt and I attempted to push beyond the rockfall at the downstream end. Both trips were hampered by high water levels which raised the possibility of trapping us beyond a flood-prone area in the initial rockfall if water levels rose. We did manage to explore about 150 m of new cave in the form of a side passage near the downstream rockfall (as described by Jeff in Southern Caver #58), but were unsuccessful in finding a route through the rockfall itself. On the second trip, charcoal detectors which had previously been installed in the streamway were recovered in anticipation that they would contain rhodamine which had been placed in JF227, a streamsink 5.5 km to the north of Niggly Cave. In fact laboratory analysis of the detectors yielded ambiguous results, probably because insufficient dye had been used in the context of the length of the flow path and prevailing high discharges. A subsequent experiment in April 1994 with the help of Stefan and Julie Styles was successful in demonstrating that Niggly Cave receives water from Porcupine Pot, a cave to the north of Niggly which contains a major stream fed by several streamsinks including JF227.

The final episode in the recent spate of trips involved the derigging of Niggly Cave by James Davis, Vera and I. The intention of a final push at the downstream end was abandoned due to heavy rain and the risk of flooding. Instead, some exploration was carried out in the northern part of the Mount Niggly Chamber, leading to the discovery of a deep pool about 5 m wide and 20 long at the base of a high shaft on the eastern side of the chamber. This pool is located 30-40 m above the base of the chamber and is thought to result from the flooding of the chamber to at least this height in a period of very heavy rain some weeks previously. Recent mud deposited on rocks high in the Mount Niggly Chamber further suggested that water had backed-up to a considerable height in this part of the cave. An additional discovery was the existence of a large stream low down in rockfall at the northern end of the chamber. This stream is presumed to be the same as that encountered in the main downstream continuation and its presence suggests some scope for exploration in the upstream direction towards Growling Swallet and Porcupine Pot. Derigging the 191 m pitch, which had been rigged for nearly a year, and the return to the surface with cave packs stuffed to capacity, entailed much hardship and suffering!

Sesame Cave (JF210-211)

Sesame Cave, originally explored to a depth of more than 200 m in the 1970s, is located 2.5 km to the south of the Niggly Cave entrance. In the early 1980s I explored a horizontal passage beyond the top of a pitch that was then thought to mark the end of the cave. This new passage represented a continuation of the large rift which is followed throughout the lower section of the cave and was explored along 2-300 m of spacious tunnel to an area of muddy rockfall. The potential importance of this discovery became more fully apparent following the breakthrough in Niggly Cave described above. This raised the intriguing possibility of finding a way into the downstream continuation of the Niggly Cave streamway from within the Chrisps Road area where Sesame is located. If the south easterly flow path of the Niggly Cave stream is maintained beyond the downstream rockfall, then this implies that a horizontal distance of only a few hundred metres may separate Sesame Cave and the unexplored downstream continuation of Niggly Cave. Sesame is known to extend in a north easterly direction, which would be consistent with a flow path towards the Niggly Cave continuation.

With these possibilities in mind I returned to Sesame with UK caver Leigh Carledge in early 1994. We spent some time exploring the rockfall where I had previously stopped, discovering that it was possible to climb high into the passage above before dropping back to the level of a minor stream below. In the downstream direction, this stream flowed beneath a large fallen block requiring wet crawling and squeezing if further progress was to be made. On the first of a series of subsequent trips, Stefan Eberhard, Julie Styles and I baulked no great distance downstream at an intimidating squeeze involving a flattener through water pooled in the streamway. The possibility of becoming stuck face down in the water half way through being sufficient disincentive for us on that occasion. Several days later, Vera Wong and I returned and were successful in passing this unpleasant obstacle. Further crawling led us to an area of muddy rockfall above the stream. The most promising lead we found was a narrow hole between large rockfall blocks which dropped vertically to a stream some distance below. On a later trip we carried gear to descend the drop but were thwarted by high water levels which made the wet crawl suicidal to attempt.

Low water levels in January 1995 saw James Davis back in Sesame. At the pitch located previously, a rope was rigged utilizing a bolt to position it at the widest point in the rift. A 13 m abseil brought us down to stream level again where we crawled beneath further rockfall to emerged into a more spacious stream passage. This point appeared to be a confluence between the minor stream we had been following and a more significant stream entering on the left. Proceeding downstream, we followed spacious passage past two further tributary streams to a siphon. Despite considerable searching on this trip, possibilities for bypassing this siphon appeared to be remote and we left the cave without the hoped-for breakthrough into the Niggly Cave streamway continuation. The total length of the new passages is estimated to be in the order of 500 m.

Prospects for Further Exploration

Water tracing suggests that Niggly Cave represents the downstream continuation of major trunk streamways in Growling Swallet and Porcupine Pot. Both of the latter caves collect the waters of multiple streamsinks and comprise major tributary segments of the extensive subterranean conduit network linked to the Junee Cave outflow. The notion of a "Junee Master Cave" - a large,

YOU can SUBSCRIBE to the SOUTHERN CAVER for \$4 per issue, post paid!

humanly accessible conduit system carrying the waters of Growling Swallet and other streamsinks en route to Junee Cave - would therefore appear to be realised at least in part by recent discoveries in Niggly Cave. A linear distance of 5.5 km still separates the closest surveyed points in Niggly Cave and Junee Cave, but the likelihood that further long sections of open streamway remain to be discovered between these two caves would appear to be high. This possibility is supported by fast flow-through times consistent with rapid flow through large conduits, which have been recorded during water tracing experiments. In the upstream direction, many kilometers of blank territory lie between Niggly Cave and Porcupine Pot, while similar distances again separate Porcupine Pot from some of its various streamsink sources (which include Rainbow Cave, Burning Down The House and Udensala). Water from other caves to the north of Niggly Cave, such as Tassy Pot and Owl Pot, may also flow to Niggly Cave and imply further complexities to the system.

The rockfall at the downstream end of Niggly Cave remains a potentially rewarding prospect for cavers prepared to push this remote location. Whilst several attempts to pass this obstacle have been unsuccessful, these have involved no more than two cavers at any one time on long trips when water levels were high. The rockfall is formed in large blocks with many possible leads to be checked, and the probability that a systematic search by motivated cavers would reveal a route into open passage beyond must be considered reasonably good.

In the case of Sesame Cave, further exploration in the downstream direction may require cave diving, the logistics of which are a daunting prospect given the arduous nature of this cave. However, only one exploratory trip has been made into the new passages and other possibilities for "dry" exploration may still exist. An aven in the new section appeared to be developed below an upper level passage which could be reached with climbing gear, although it is not possible to predict whether this passage continues horizontally or trends back towards the surface. The three tributary streams which were noted appeared to be largely choked by mud in the upstream direction, but were not investigated in any detail. The origins of these tributaries are uncertain. There are a number of streamsinks in the Chrisps Road area which could connect with Sesame including Chrisps Creek Swallet, Tarn Creek Swallet, Ring Hole, JF202, Rescue Pot, Voltera. The discharge of the tributary streams in Sesame Cave did not appear to be sufficient to account for the larger of these streamsinks, and water tracing would be required to test the existence of hydrological connections, if any, with these sources.

In the absence of an accurate survey, the precise extent of new passages in Sesame Cave are unknown. It is one of the few caves which penetrate to a significant depth in the blank area on the map between Niggly Cave and Junee Cave, and any future breakthrough in Sesame is likely to be of considerable interest. The 139 m deep Satans Lair, located 1 km to the east of Sesame, also has potential in this respect, although the rockfall chamber at the current deepest point in Satans Lair is still in the order of 100 m above the level at which horizontal development is likely to prevail. There are, of course, other cave entrances in the vicinity of both Satans Lair and Sesame which have been explored only cursorily or not at all. In general, the potential for new discoveries throughout the Junee River catchment remains enormous.

RELIABLE LIGHTS for HIRE. CHEAP GEAR for SALE-see the BACK PAGE!

A Basic Bushbash...

Dave Rasch

While going through some old boxes of personal stuff one day in 1993, I came across this old pocket computer (circa 1982) called a Sharp PC-1211 (also marketed by Tandy Corp. under their own label). It has a single line LCD display and a standard keyboard and operates off several camera batteries. I'd never really used it for anything.

During exploration and surveying of the ever-increasing JF341/Rift cave system, I decided that it would be very useful to be able to surface bash to a point directly over a particular aven, for example, especially after you've come across a pile of sticks sitting at the base of it. So I packaged up a bit of trigonometry, and wrote this Basic program. It lets you start at a known survey station, for example at the entrance to a cave, and bash your way using survey gear in the general direction of the point you want to reach. At each stage, the program tells you the new distance and bearing to the desired spot. Over a range of a couple of 100 metres of forest, the method has proved accurate to about 5 metres, close enough to have a good poke around knowing you're close to being right on top of the aven.

Because I hadn't used up the full memory capacity of the computer, I also included some surveying code as well to keep track of the total distance and direction from a starting point. This bit of the program has been used several times by muddy cavers at 1 a.m. sitting in a cold vehicle after having returned from a long exploration trip, to calculate the furthest point of exploration for that trip before hitting the sack.

Only problems I've encountered with it so far are that the computer keyboard isn't waterproof (a bummer in Tassie), also it's pretty intolerant to entering a wrong number by mistake. Sometimes it's possible to recover by entering another bogus measurement that exactly cancels the previous one, but it's a bit of a worry after you've just surveyed 40 stations and nobody wants to start again!!!

Because it's such an old type of computer, there's probably no-one else out there with one, but you never know...!

```
10  DEGREE: R = 0
20  INPUT "ENTER START X COORD:";X
30  INPUT "ENTER START Y COORD:";Y
40  INPUT "ENTER START Z COORD:";Z
50  PAUSE "ENTER 1 FOR BUSHBASH..."
60  INPUT "2 FOR CAVE SURVEY?";W
70  IF W=1 THEN 100
80  IF W=2 THEN 300
90  GOTO 50
100 PAUSE "HIT 1 IF DEST COORDS.."
110 PAUSE "ARE KNOWN, OR 2 IF.."
120 INPUT "AZ/EL/DIST ARE KNOWN?";Q
130 IF Q=1 THEN 200
140 IF Q=2 THEN 240
150 GOTO 100
```

YOU can SUBSCRIBE to the SOUTHERN CAVER for \$4 per issue, post paid!


```

200 INPUT "ENTER DEST X?";I:E=I-X
210 INPUT "DEST Y?";J:N=J-Y
220 INPUT "ENTER DEST Z?";K:U=K-Z
230 GOTO 300

240 INPUT "ENTER DEST TAPE DIST?";H
250 INPUT "ENTER DEST AZ?";F:INPUT "ENTER DEST EL?";G
260 A=H*COS(G):N=A*COS(F):E=A*SIN(F):U=H*SIN(G)
270 I=X+E:J=Y+N:K=Z+U

300 GOSUB 600
310 PRINT "HZ. DIST TO DEST:";USING "####.#";D;"M"
320 PRINT "AZ TO DEST:";USING "####.#";F;"DEG"
330 GOSUB 500
340 E=E-S:N=N-M:U=U-V:GOTO 300

400 I=X:J=Y:K=Z:E=0:N=0:U=0
410 GOSUB 500:I=I+S:J=J+M:K=K+V:E=E+S:N=N+M:U=U+V
420 GOSUB 600
430 PAUSE "NEW COORDS:X=";USING "####.#";I
440 PAUSE "NEW CORRDS:Y=";USING "####.#";J
450 PAUSE "NEW CORRDS:Z=";USING "####.#";K
460 GOTO 410

500 INPUT "TAPE(0 FOR SUMMARY)?";T:R=R+T:IF T=0 GOSUB 700
510 IF T=0 GOTO 500
520 INPUT "COMPASS?";C:INPUT "CLINO?";L
530 A=T*COS(L):M=A*COS(C):S=A*SIN(C):V=T*SIN(L):RETURN

600 D=√(N*N+E*E):G=ATN(U/D):H=√(D*D+U*U)
610 F=ACS(E/D):IF N<0 LET F=360-F
620 F=90-F:IF F<0 LET F=F+360
630 RETURN

700 PAUSE "START X=";USING "####.#";X
710 PAUSE "START Y=";USING "####.#";Y
720 PAUSE "START Z=";USING "####.#";Z
730 PRINT "DEST X=";I
740 PRINT "DEST Y=";J
750 PRINT "DEST Z=";K
760 IF W=1 THEN 810
770 PRINT "L.O.S. DIST FROM START";H;"M"
780 PRINT "AZ FROM START";F;"DEG"
790 PRINT "EL FROM START";G
800 GOTO 900
810 O=I-E:PRINT "CURRENT X=";USING "####.#";O
820 O=J-N:PRINT "CURRENT Y=";USING "####.#";O
830 O=K-U:PRINT "CURRENT Z=";USING "####.#";O
840 PRINT "AZ TO DEST";USING "####.#";F
850 PRINT "EL TO DEST";USING "####.#";G;"DEG"

900 PRINT "SURVEYED LENGTH=";R;"M"
910 RETURN

```

The Top Ten caves in Tasmania-an update.

Just in case you were interested. These lists are based on a variety of sources and are as good as you can get at the time of writing.

The Deepest	Cave	Depth (m)	Area
1	Niggly Cave	375	JF
2	Anne-A-Kananda	373	MA
3	Ice Tube-Growling Swallet System	360	JF
4	Khazud-Dum	333	JF
5	Cauldron Pot	305	JF
6	Serendipidity	278	JF
7	Rift Cave-Threefortyone System	249	JF
8	Tassy Pot	238	JF
9	Arrakis	235	MW
10	Niagara Pot	230*	JF

(* survey incomplete, estimated figure)

The Longest	Cave	Length (m)	Area
1	Exit Cave System	19000-23000*	IB
2	Growling Swallet System	12000**	JF
3	Threefortyone-Rift Cave System	9000**	JF
4	Herberts Pot	5730	MC
5	Wargata Mina	4283	C
6	Kubla Khan	4027	MC
7	Niggly Cave	3400	JF
8	Bauhaus System	3077	PB
9	Anne-A-Kananda	3000	MA
10	Serendipidity	2948	JF

(* survey incomplete, variously quoted)

(** survey incomplete, estimated figure)

Minimal Impact Caving Tips

Ever been caught short on a caving trip?

It is no fun at all trying to keep that sphincter closed tight when you've got some time to go before you can get out of that cave, even worse if there's a pitch or two to prussik. One idea from the UK is to remove a gumboot, deposit the load into it and then put your boot back on. The argument here is that the poo is in a more comfortable place and you haven't soiled the cave. Stories have it that Steve Bunton has an adaptation on this, in that you drop your load into your waterproof hood on your caving suit, but there is trick here, i.e. to remember not to put your hood on! A much better solution is to carry an empty carbide banana (a piece of car inner tube, sealed by folding the ends and using rubber bands (cut from the tube) to seal the ends and several paper bags/loo paper (kept dry in the banana). If you are caught short you drop your load into a paper bag (or two) and then deposit it in the banana. The banana is burstproof and more importantly stops that unmistakable dreaded smell from going through everything in your pack.

YOU can SUBSCRIBE to the SOUTHERN CAVER for \$4 per issue, post paid!

Avoid those food crumbs

Crumbs of food remaining in caves lead to often quite weird and amazing fungus growths. They may look great, but they are out of place and it is preferable not to drop food crumbs. A non-crumby lunch is always a good idea. as is using a plastic bag in a similar way to a horse 'nose-bag' to catch the crumbs.

CAVE LEADERSHIP ACCREDITATION GROUP-What's on.

CLAG is slowly getting itself going, competencies for the two levels of cave leader (Level 1-Horizontal and Level 2-vertical) have been pretty well finalised and there is a national ASF meeting early next month to ensure all states are in line with each other and agree with National standards.

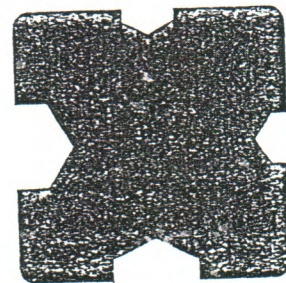
Logbooks for would be CLAG aceditees have been produced and it is planned that the first assessment of prospective Level 1 Cave Leaders will be held on the weekend of November 4/5, 1995. This assessment process will cost participants \$100 and involve an assessment of caving and cave-leadership skills during a caving trip. Further details can be from CLAG, PO Box 416, Sandy Bay, 7005.

To assist prospective Level 1 Cave Leaders (or Cavers in General) to develop their skills a **Cave Safety (1) Workshop** is being held on Sunday October 22nd. This full day workshop (costing \$50) will cover all facets of pre-cave/in-cave and post-cave safety related issues. Topics to be covered include: what is adequate clothing, weather considerations, trip intentions, group communications, backup equipment, first-aid considerations, lost party-member, lost group, rigging ladders and belay lines, what rescue gear to take, how to rescue someone on belay, a Z-pulley haul system, how to handle potential disasters, care and cleaning of gear, retiring gear and more! A variety of methods (overheads, notes, video and practical demonstrations) will be employed to make this an informative and interesting day. An essential part of the day is that participants will get to practise the demonstrated skills. For further information, contact CLAG, as above.

JB

Gear Ideas**A maillon spanner**

Some friends from MSS were down earlier in the year and I noticed one of them had a small flat plate (about 4 mm thick) spanner (see diagram opposite, shown at about actual size). It was certainly handy for undoing stubborn maillons. An attached cord helps avoid misplacing it!

**The ultimate spare light?**

It just so happens that a LED (light emitting diode) fits into those lights (e.g. Mini-mag) which take those tiny (but bright) bulbs. The only trick is to get the polarity right. A typical LED consumes about 20-50 mA (depending on colour and brightness), significantly less than about 250-300 mA the original bulb drew. So this arrangement will give you something like about 50-100 hours out of a single set of AA batteries. Admittedly the light isn't as bright as with the normal bulb, but it could be useful.

RELIABLE LIGHTS for HIRE. CHEAP GEAR for SALE-see the BACK PAGE!

Another option for a rechargeable battery pack for your Petzl headlamp

In the last Southern Caver I described how to knock up a low cost (about \$20-25) battery pack using sub-C Nicads which gives you a duration of about 5 hours. A friend informed me that it is possible to obtain a 7/5 Af (basically an extended AA) Nickel Metal Hydride battery with a capacity of 2.5 AmpHours and that three of these fit into the Petzl battery compartment. This option gives you an improved duration of about 10 hours, but the hitch is that these batteries are about \$25 each, so for double the light you are paying about three times as much.

Eliminating one source of compass errors

Some people when surveying use a small torch to illuminate the numbers on their Suunto compass, unfortunately if they happen to stick the compass (or metal framed glasses!) too close the reading is affected. By keeping the torch at least 10 cm away this problem is avoided. Even better, nowadays there is a version of compass fitted with a small lithium battery powered light (far superior to the old tritium light), similar to a wristwatch light. This enables one to clearly see the numbers without introducing errors. Suss this model out when you have to replace your compass.

Need lots of light?

Here's a great idea (borrowed from Paul van Nynnaden of the Northern Caverneers) if you are doing some filming or just want to improve your tan whilst underground. You can buy 50 Watt, 12 Volt quartz halogen dichroic spot lights. These little numbers really pump out the light and the heat, the dichroic bit means that the light comes out the front and most of the heat goes out the back-so you do have to allow lots of ventilation. A caveproof housing can be made from some plastic plumbing fittings (remember not to cover the back end and to drill lots of cooling holes in the sides so air can circulate, also no glass or plastic on the front!). You can buy a 12 Volt, 4 Amp hour gel-cell that weighs about 1.7 kg to power your mega-light. A battery of this capacity will give you about half to one hour of use, depending on how you use it (more time for lots of short bursts, less time for a single burn).

JB

[Yet another unpublished survey from the last decade! Yes, and there are more to come in future issues of the Southern Caver. The '80's were a very productive time in terms of exploring and surveying caves, but alas weren't quite up to it in terms of publishing! We are slowly making amends. Ed.]

Udensala (JF232)

Udensala attains a depth of 181 m and ranks in the mid-twenties in terms of the deepest caves in Tasmania. The length is quite modest at about 350 m. A Developed Long Section and a Plan are included on the following two pages.

Udensala is very infrequently visited, in fact I haven't heard of a trip there since the last bout of exploration and surveying which occurred in 1984. By all accounts the cave is generally regarded as extremely nasty with lots of unstable and potentially dangerous rockfall. A rigging guide goes something like,....if possible, find a solid rock! It is not surprising no-one has been back!

YOU can SUBSCRIBE to the SOUTHERN CAVER for \$4 per issue, post paid!

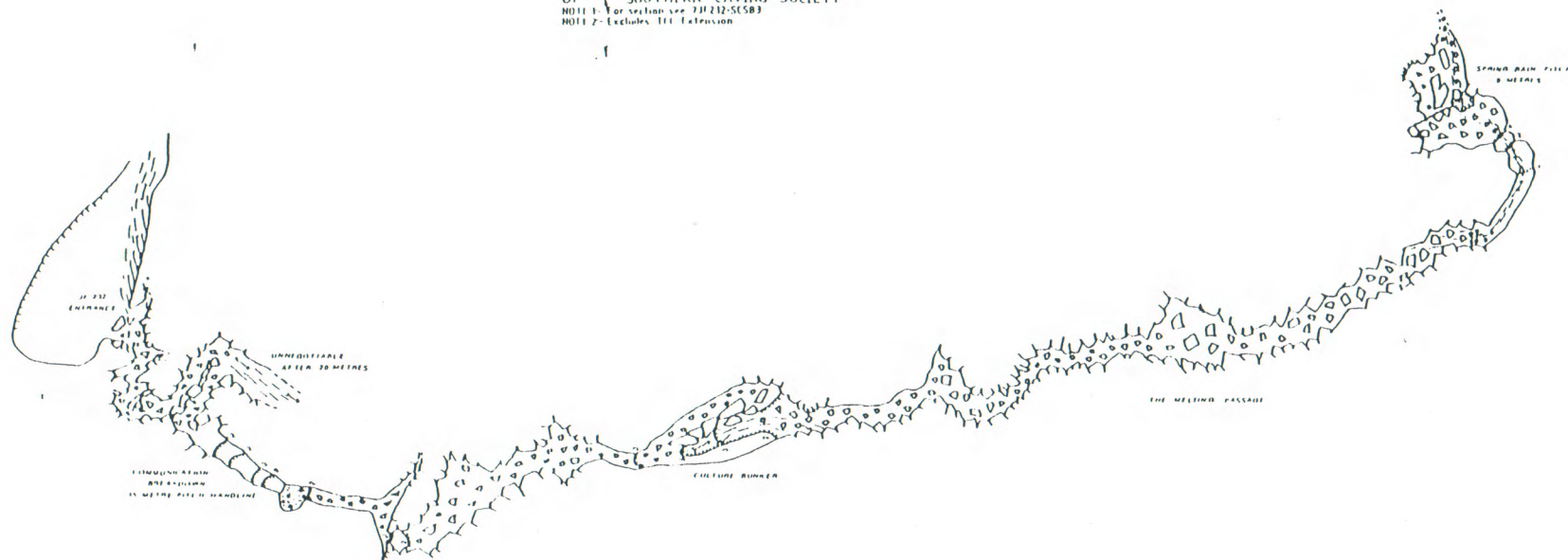
UDENSALA JF 232

PLAN

A.S.E. MAP No 7JF232-SCS86

SCALE - 1:200
0 5 10 15 20 25

SURVEY DETAILS
DATE - August 1984
GRADE - 4.4
BY - SOUTHERN CAVING SOCIETY
NOTE 1 - For section see 7JF232-SCS83
NOTE 2 - Excludes 1st Extension



Drawn P. Jackson

UDENSALA JF 232

DEVELOPED LONGITUDINAL SECTION

ASE MAP No 7JH 232-SCS03

SCALE 1:200

0 5 10 15 20 25

SURVEY DETAILS - MAIN PASSAGE

Date - August 1984

Grade - ASI 44

By - Southern Caving Society

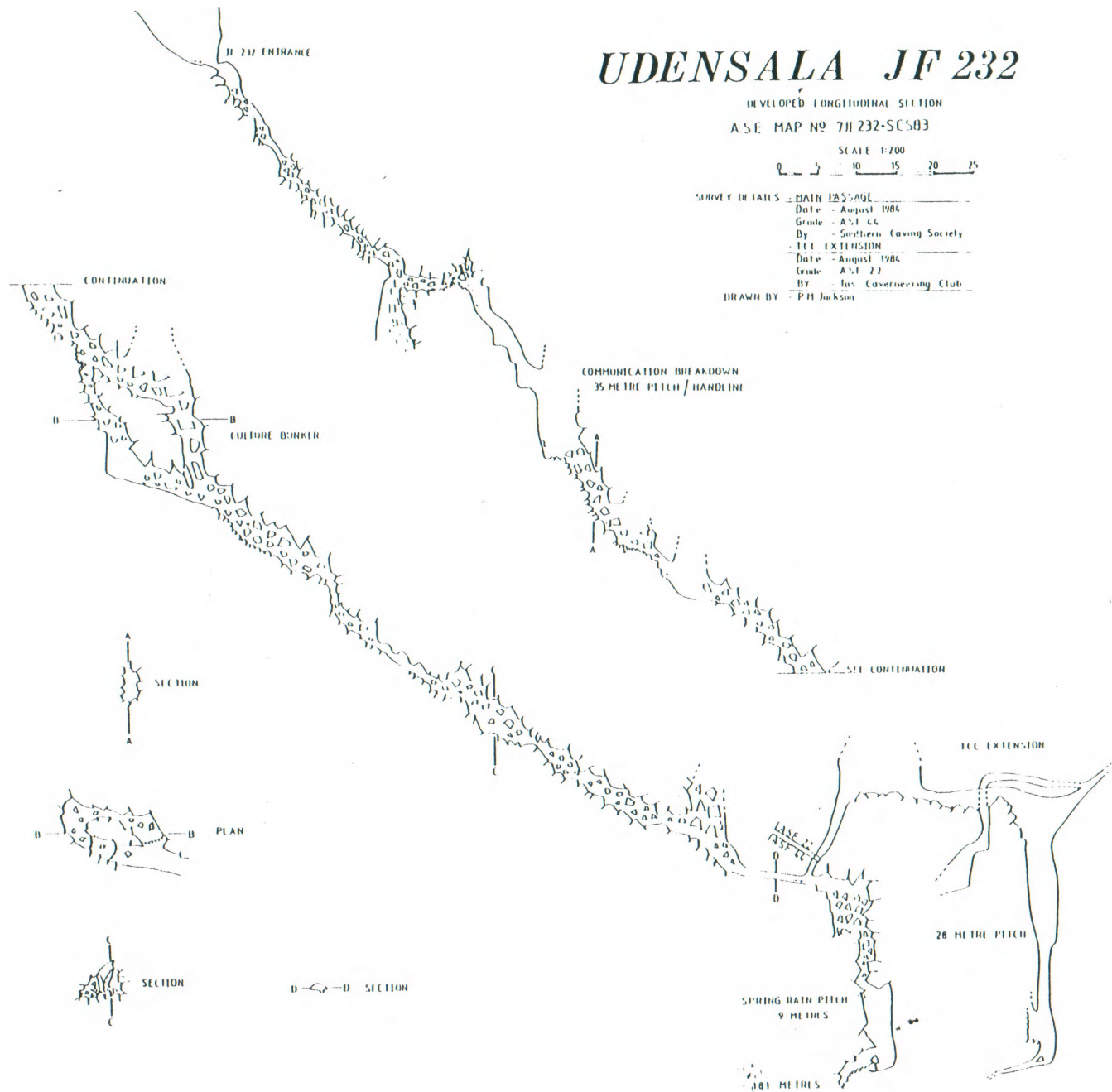
TLC EXTENSION

Date - August 1984

Grade - ASI 22

BY - Ips. Caving Club

DRAWN BY - PH Jackson



Recharging dry cell batteries-does it work and is it worth doing?

Jeff Butt

Various brands of battery chargers (with names like Greencell, Regenerator) are available for recharging primary (single use) dry cell batteries and typically they make claims that alkaline batteries (e.g. Duracell, Energiser) can be recharged up to 10 times and heavy duty carbon-zinc batteries (e.g. Eveready) can be recharged up to 3 times. This certainly sounds like an environmentally and pocket friendly thing to do, but still isn't quite as good as using rechargeable batteries which may be recharged hundreds of times.

These 'regenerators' use either a 50 Hz or 12 kHz positively biased AC current to charge the batteries. Note that dry cells tend to explode if charged with Nicad type battery chargers, the regenerators are designed to prevent this from happening.

Both Electronics Australia (March '95) and Choice (July '95) set out to see if the manufacturers claims were true and Electronics Australia also wanted to see how one could get the most out of recharging dry cells. I refer you to the original articles to see their methods. Both AA and D cells were used, and the batteries were placed on a continuous drain. Cavers commonly use these batteries in this manner, so the results should be reasonably valid.

A summary of the results follows:

- alkaline batteries are more effectively recharged than standard dry cells (carbon-zinc), but carbon-zinc batteries are recharged to only almost useless amounts. It seems that the manufacturers claims rely heavily on the words "up to",
- both types of chargers (50 Hz or 12 kHz) seem to be equally effective,
- better results are obtained if you don't flatten the batteries too much before recharging them, an end voltage of between 1.1 and 1.2 Volts (for alkaline cells) was suggested as appropriate (at 1.2 Volts only about 50% of the batteries capacity has been used, at 1.1 Volts this increases to about 80 % and at 1.0 Volt about 100%),
- it is likely that a recharged cell will lose its charge more quickly than a new cell, so it would be best to recharge immediately before the next use, rather than after straight after the last use and have the charged battery sitting around losing charge.
- generally the effectiveness dropped off with time, i.e. the first recharge produced better results than the second and so on,
- typically a recharged alkaline cell delivered about 47% of its original capacity over each of 6 recharges,
- Choice recommended not to bother trying to recharge dry cells and that both environmentally and economically it is better to use rechargeable batteries.

In summary it seems that it is better to stick with rechargeable batteries, such as Nicads. However, it is worth noting that alkaline batteries have about 4 times the capacity as Nicads, so if weight is important you might be better to use standard alkaline batteries. Recharged alkaline batteries will on average only last up to about twice as long as Nicads and so the weight advantage is diminished, but is still present.

RELIABLE LIGHTS for HIRE. CHEAP GEAR for SALE-see the BACK PAGE!

Aeolian Calcarenite Karst at High Rocky Point, West Coast of Tasmania

Rolan Eberhard

In 1991 I had the opportunity to briefly visit a remote karst located at High Rocky Point, some 65 km to the south of Cape Sorell on Tasmania's rugged west coast. The site is one of only a few Tasmanian karsts developed in aeolian calcarenite (carbonate-rich lithified dunes), although karsts developed in this rock type are relatively common along the southern margin of the Australian mainland and the Bass Strait islands. In comparison to the dense, mechanically strong Ordovician limestones and Precambrian dolomites in which the majority of Tasmanian karst occurs, aeolian calcarenites are porous and often poorly consolidated. Nevertheless, these young "dune limestones" are known to host well-developed karst landforms including sizeable caves.

Aeolian calcarenite at High Rocky Point crops out at about 30 m above present sea level where it overlies Cambrian volcanic rocks. Outcrop takes the form of a low, south-facing cliff on the northern side of Minder Cove. The total thickness of the deposit is unknown, but is unlikely to exceed 10-20 m. The rock is soft and friable with a sandy texture. Apparent cross-bedding structures are suggestive of an origin as a dune (aeolian) deposit. The identification of the rock as calcarenite rests primarily on the evidence of tufa deposition (see below), and the implication that highly calcareous sands are present. In general character, the rock resembles aeolian calcarenites that the author has come across elsewhere in Tasmania and on the mainland. The Montgomery geological sheet (Geological Atlas 1:50 000 Series Sheet 7912S) maps the deposit as "Pleistocene older marine sands and raised-beach deposits". Two additional minor occurrences of the same unit are mapped at similar altitudes along the coast within 2 km to the north of High Rocky Point, while a more extensive occurrence is mapped about 15 km to the south between The Shank and Veridan Point. None of these other sites have been visited by the author and whether aeolian calcarenites are also present is unknown.

The calcarenite cliff at High Rocky Point is the location of a small cave comprising a single bell-like chamber that does not penetrate beyond the limit of daylight. The chamber is about 3 m high, 5 m wide and 13 m long, containing a gently inclined sandy floor. It is thought to result primarily from salt weathering and wind action rather than solution by groundwater, and lies well above the level of Last Interglacial sea levels unless considerable uplift of the land surface has occurred. The rock walls of the chamber exhibit numerous engraved lines including possible biomorphic designs. These are thought to have been made by the previous Aboriginal inhabitants of the area.

Below the cave entrance is a steep grassy slope containing bone and shell midden material. Towards the base of the slope is a tufa or travertine deposit of flowstone-like form covering an area of several metres. This overlies the Cambrian rocks and forms a cascade extending down to the swash zone. The tufa is greyish-white in appearance and is partly covered by moss and algae. The site is the location of a minor spring that appears to be depositing tufa due to carbonate uptake within the calcarenite above.

Snippets from *Cavers Digest* on the Internet

Jeff Butt

I have been asked, "What sort of stuff is found in the Cavers Digest on the Internet?" Well, in response I must say subjects are many and varied. Not unexpectedly, there is an amount of intra-country cave politics and slanging matches, but of course you can ignore all of this. Much of the 'worth reading' information concerns facts and figures, everyone wants to know the longest, deepest, most beautiful etc. for caves and karst areas all around the world. Of course there are also the local 'characters', names such as "Wookey (the wook)", "Olly" and so on keep on cropping up. The 'gurus', such as Al Warild make contributions every now and then too. People also enjoy sharing good ideas, or seeking contacts and/or information for planning trips to exotic places. Details of accidents/rescues are also popular and hopefully may prevent further accidents! There is a tendency for some subjects to continually reappear, largely due to the ever expanding new number of subscribers who may not be aware of what has gone on before (it is worth checking out the archives, they are enormous!) I am sure there are large numbers of people just 'listening' (i.e. reading) to what's going on too. The following is an extremely brief précis of a selection of articles I found interesting over the last about 12 months. It will give you an idea of the type and flavour of information available. If anyone is interested in finding out further about any of these topics, please ask.

- new cave finds-Kazumura Cave, in Hawaii. Now the longest and deepest lava cave in the world at 888 m deep and 47200 m long.
- conjecture about limestone on Mars and what caves (if any) are like there.
- caves in Slovenia, Cehi 2 is the deepest at 1370 m and includes a single drop of 370 m. There are 3 caves over 1000 m deep and 13 over 500 m. Postojnska Jama at 19555 m length is the longest.
- deepest caves in the world. Réseau Jean Bernard in France is the deepest at 1602 m and it has a length of 17900 m. Three caves exceed 1500 m depth and there are 44-over 1000 m depth. Europe hosts most of the deepest (> 1000 m) caves (Spain-10, Austria-8 and France-6).
- longest caves in the world. Mammoth Cave in the USA is 560 km long. there are 9 caves over 100 km long, 26 over 50 km and 111 over 20 km. Our own Exit cave was listed 148th on the list at 16 km.
- The next International Union of Speleology (IUS) conference is to be held in 1997 in Switzerland.
- long straws. In France there is one 7 m long. The SW of Western Australia boast one at 6.9 m. This led on to an engineering type of discussion about the theoretically longest straw possible.
- the price of Global Positioning System (GPS) units seems to be plummeting, prices are now as low as US\$300.
- battery technology. Lithium ion batteries are now available, they have long shelf lives, high energy capacity and they cost. Quite a bit of information on the ins and outs of rechargeable alkaline batteries, as well as Nicads.
- a discussion of the best food for caving and keeping you warm in caves.
- caving in the NE Indian Himalaya.
- the highest caves in the world occur in Northern Pakistan on the slopes of Nanga Parbat at 6600 m. There is also limestone on Gasherbrum at 6000m.

- techniques for keeping warm-methods/food/clothing arrangements used by people all around the world for different types of conditions encountered.
- book reviews, eg. The Natural History of Biospeleology.
- descriptions and reviews of Cave Survey Software (many are available for free), packages for PC's, Macs and handheld calculators-packages go by names such as COMPASS, VECTORS, CAVEPLOT, TOPOROBOT, SMAPS, SMPAS-LITE, SURVEX, CAVEML, KARST, FINDCAVE, CSURVEY, WALLS, CAVEVIEW, PITTER-PLOTTER, SURV18 and HP488X.
- rescues and accidents, there seem to be large numbers in the USA. Two Polish cavers who hadn't left trip intentions were rescued from a shaft in an abandoned mine after 24 days, they survived by talk of food and a trickle of water, days were counted by the cycle of bat entry/exits. An extremely competent caver working at scaling a large aven abseiled down a rope tail without a stopper knot and fell 90 m to his death.
- surveying, the types of accuracy obtained with different instruments.
- robotic caving, remote controlled model helicopters fitted with video cameras-what a way to go!
- photography, slave flash systems, digital photography, IR photography.
- sewing-tips of how to produce a good result, the strength of different stitch patterns, protecting stitching from abrasion with aquaseal etc.
- caving ladders, a discussion on the different methods of construction, what's best and easiest. How to prolong the life of ladders.
- gear innovations, including a darkproof carbide light-the electric backup comes on automatically whenever the carbide goes out, the Petzl pompe 2:1 ascender system-half the effort, but only half the distance gained with each cycle, comes into its own when carrying huge loads!
- techniques for locating caves such as ground penetrating radar, micro-gravity measurements and dowsing (divining).
- prussiking techniques and avoiding pain in the "bollocks".
- derigging techniques for deep caves, PAELLA (Pull As an Enormously Long Length Altogether).
- caving suits, the virtues of different brands, their comfort and longevity.
- employment opportunities (Hawaii Lava Caves National Park).
- a discussion about the ultimate caving vehicle; Cavers vehicle licence plates.
- caving trips-contacts, ideas or information wanted for all sorts of countries.
- a discussion of Cave For Pay (CFP) and the trend in some countries to introduce Cave Fees similar to Peak Fees in Mountaineering.
- Landowner access problems, legalities, disclaimers etc.
- caving pictures (via the World Wide Web (WWW)) from around the world.
- new WWW servers and cyber-caving sites in karst-space! Whacko!
- Paleolithic cave art found in France.
- Expedition First Aid kits, what to include and the ins and outs of different drugs (mainly pain-killers).
- Digging and dirt/rock removal techniques, using buckets/sleds/trailers etc.
- new deepest cave in the Southern Hemisphere, Muruk Cave in East New Britain has reached 1141 m depth.
- and lots more.

YOU can SUBSCRIBE to the SOUTHERN CAVER for \$4 per issue, post paid!

[Eds. note. The ASF code of ethics has been around for a long time and I'm sure you all abide by them. the ASF Minimal Impact Caving Code hasn't been around as long and some of our readers may not have seen it, so it is presented here, along with a copy of the Code of Ethics.]

ASF (Inc.) MINIMAL IMPACT CAVING CODE - 1995

"What we have now is all there will ever be - Conserve Australia's Caves"

Introduction

The need for a Minimal Impact Caving Code (MICC) has evolved over many years as cavers have realised the impact that they have on caves. That impact is so diverse and varied that it has become necessary to devise a caving code that ensures that cavers are aware of the measures that are necessary to reduce their impact on caves.

To those of you who have just become Australian Speleological Federation Inc) (ASF) members it is important that you understand that a MICC IS necessary because cavers are one of the major sources of damage to caves. Read the MICC carefully and apply it to all of your caving - it will not completely stop cavers damaging caves but it will certainly reduce their impact on the cave environment. This MICC was devised by cavers FOR CAVES -please assist the Caves of Australia by using these simple MIC techniques.

This MICC should be used in conjunction with the ASF Code of Ethics.

General

This code is divided into two sections. One relating to the exploration of a newly discovered cave or section of cave and the other relating to general cave visitation.

The following practices may fall into both sections and may be modified depending on the type of cave being visited. It should be stated that we are discussing here a code which will ensure that cavers have a minimal impact on the cave they are visiting. In many instances the practices may not apply as the impact that cavers have, may be minuscule, compared to the impact of flooding of the entire cave, for example. These practices are generally intended to apply in caves where cavers are likely to have a detrimental impact on the cave purely by entering the cave.

In-cave marking refers to the use of a variety of materials to define tracks, routes and barricades in a cave. These measures should be taken to protect sensitive areas, confine caver foot damage, make cavers aware that a sensitive (it may be an unobvious cave animals' territory) area exists.

THERE ARE NO EXCEPTIONS TO THIS CODE - SURVEYORS, PHOTOGRAPHERS, SCIENTISTS, EXPLORER'S ETC. ARE ALL SUBJECT TO THIS CODE.

General Cave Visitation

1. Remember EVERY caving trip has an impact. Is this trip into this cave necessary? If it is just for recreation, is there another cave that is less vulnerable to damage that can be visited? Make this assessment depending on the purpose

of your visit, the size and experience of the proposed party, and IF THE TRIP IS LIKELY to damage the cave.

2. Where possible the party leader should have visited the cave previously and hence should be aware of sensitive features of the cave, the best anchor points, and generally reduce the need for unnecessary exploration.

3. Cave slowly. You will see and enjoy more, and there will be less chance of damage to the cave and to yourself. This especially applies when you are tired and exiting a cave.

4. If there are beginners on a trip, make sure that they are close to an experienced caver, so that the experienced caver can help them when required, e.g. in difficult sections. Ensure that the party caves at the pace of the slowest caver.

5. Keep your party size small - 4 is a good party size.

6. Cave as a team - help each other through the cave. Don't split up unless impact is reduced by doing so.

7. Constantly watch your head placement AND that of your party members. Let them know before they are likely to do any damage.

8. Keep caving packs as small as possible or don't use them in sensitive caves or extensions.

9. Ensure that party members don't wander about the cave unnecessarily.

10. Stay on all marked or obvious paths. If no paths are marked or none is obvious - define ONE!

11. Learn to recognise cave deposits or features that may be damaged by walking or crawling on them.

Examples are:- Drip Holes, Stream Sediments, Paleo soils, Soil Cones, Crusts, Flowstone, Cave Pearls, Asphodilites, Bone material, Potential Archaeological sites, Cave Fauna, Coffee & Cream, Tree Roots.

12. Take care in the placement of hands and feet throughout a cave.

13. Wash your caving overalls and boots regularly so that the spread of bacteria and fungi are minimised.

14. If a site is obviously being degraded examine the site carefully to determine if an alternative route is possible. Any alternative route MUST not cause the same or greater degradation than the currently used route. If an alternative is available suggest the alternative route to the appropriate management authority and report the degradation.

15. Carry in-cave marking materials while caving and restore any missing markers. Tape off sensitive areas you believe are being damaged and report the damage to the appropriate management authority.

16. If it is necessary to walk on flowstone in a cave remove any muddied boots and or clothing before proceeding OR DON'T PROCEED! Sometimes it is better to assess the situation and return at a later date with the appropriate equipment.

17. Treat the cave biota with respect, watch out for them, and avoid damaging them and their "traps", webs, etc. Also avoid directly lighting cave biota if possible.

18. If bone material is found on existing or proposed tracks it should be moved off the track to a safer location if at all possible. Collection should only be undertaken with appropriate permission.

19. If you eat food in a cave ensure that small food fragments are not dropped as this may impact the cave biota. One way is to carry a plastic bag to eat over and catch the food fragments. This can then be folded up and removed from the cave.

20. Ensure that all foreign matter is removed from caves. This includes human waste. If long trips are to be made into a cave ensure that containers for the removal of liquid and solid waste are included on the trip inventory.

21. When rigging caves with artificial anchors, e.g. traces, tapes, rope etc., ensure that minimal damage occurs to the anchor site by protecting the site. For example protect frequently used anchors, e.g. trees, with carpet, packs, cloth, etc. Bolts should only be used where natural anchors are inappropriate.

22. CAVE SOFTLY!

New Cave or Extension Explorations

1. The existing microbiology of the new cave, both fungi, bacteria, and a world of protozoa, will almost certainly be irreversibly contaminated on the first trip into the cave! If you consider cave microbiology has not been investigated in the area of this new cave, if cave microbiologists are available, then please consider including them on initial explorations so that they may collect uncontaminated samples.

2. Do not enter the new area if you do not have the equipment required to undertake the minimal activities. Surveying equipment and in-cave markers.

3. The minimal activity should be in-cave marking and surveying. Not purely exploration.

4. Ensure that all alternative routes are examined, by completing the cave survey, prior to crossing sensitive areas. It may not be necessary to enter some areas as they can be by-passed.

5. Having determined that a sensitive area is to be crossed it should ALWAYS be marked. Reduce future damage by defining a distinct, minimal width track.

6. Discuss in-cave marking within the party and ensure that all ideas are evaluated before marking is undertaken.

7. CAVE SOFTLY!

ASF (Inc.) CODE OF ETHICS AND CONSERVATION

Adopted 1992

1. Introduction

1.1 Recognising their primary aim of protecting the caves and karst of Australasia, cavers will actively promote cave conservation and sound management practices through example, education, advice and training.

1.2 This code establishes a minimum standard of caving practice.

1.3 Higher standards may be required by management authorities for particular caves or karst regions, in which case those standards will be adhered to.

2. Toward Landowners and Management Authorities

2.1 Landowners, tourist guides and any person representing a management authority will be treated with courtesy and respect.

2.2 All caving parties must have specific or tacit approval from the landowner and/or management authority before entering any property or reserve, must follow only agreed routes and must not visit forbidden areas.

2.3 The prevailing procedures regarding gates on properties and reserves will be followed, and care taken to cause no damage to stock, crops, equipment or landscape features. In short, leave as found.

2.4 All parties will be as self sufficient as possible and will not presume on the good will of landowners and/or management authorities for water, supplies or assistance.

2.5 Where the cave entrance has been blocked by the landowner and/or management authority, it will be re-blocked after use, or, with the landowner and/or management authority's permission more appropriate protection installed unless the landowner and/or management authority otherwise instructs.

2.6 No gate will be installed at or in a cave unless approved by the landowner and/or management authority and arrangements are made for key security. Any gate must have an accompanying sign giving reasons for gating and access conditions unless the landowner and/or management authority otherwise instructs.

2.7 No cave excavation, including the use of explosives, will be undertaken without the permission of the landowner and/or management authority and/or management authority and the society committee, and only after an assessment of the environmental effect.

3. Toward Caves

3.1 Camping will not occur in a cave, unless absolutely necessary to achieve a specific speleological or conservation objective.

3.2 Caving activity must be conducted in a manner responsible to the cave environment, taking particular care to avoid damage to speleothems, sediments, biota and other natural phenomena. The maximum size of any party should be

YOU can SUBSCRIBE to the SOUTHERN CAVER for \$4 per issue, post paid!

limited to that which provides the best quality of experience or achieves specific aims.

3.3 Cave entrances and passages should not be excavated/enlarged, including the use of explosives, water levels in sumps should not be modified and stream flows should not be diverted, until all possible effects are assessed and the appropriate permission gained. Any modification must be the minimum required.

3.4 Established marked routes must be used, single tracks should be followed and care taken to avoid needless deposition of mud. Mud-throwing or modeling is unacceptable.

3.5 All human introduced wastes must be removed from the cave and disposed of properly.

3.6 Cavers will not smoke in any cave.

3.7 Caves must not be disfigured by unnecessary marking (including 'direction arrows'). Entrance tags and survey marks should be small and inconspicuous.

3.8 Disturbance should not be caused to any biotic community. No disturbance should be caused to maternity or over-wintering roosts of bats. Collection of specimens will be kept to the minimum required for study purposes only.

3.9 The technique, agent and justification for air or water flow-tracing experiments should be chosen to minimise environmental impact and must be approved by the relevant authorities and the society committee.

3.10 Explosives should not be used inside a cave or at the entrance unless absolutely necessary, and then only with the permission of the landowner and/or management authority and the society committee, and only after an assessment of the environmental impact.

4. General

4.1 Recognised codes for minimum impact camping will be observed with particular emphasis on complete removal of rubbish and, wherever possible, avoidance of camping on karst catchment areas.

4.2 Reports on speleological work and caving activities are to be honest and accurate, avoiding sensationalism or exaggeration.

4.3 Any published work must acknowledge other people's contributions to the work, either as clubs or individuals, published work or personal communication.

4.4 Consideration should be given before publishing an article disclosing a cave's location, as to its intended audience, the wishes of the landowner and/or management authority, and the subsequent effect on the cave.

4.5 When visiting an area frequented by another society, the club or party will co-operate fully with that society.

4.6 Disputes will be conducted in a restrained and responsible manner.

SCS CONTACT LIST (August '95)

	(home)	(work)
Andrew McNeill (14 Darcy St, South Hobart)	237204	207446
Arthur Clarke (17 Darling Pde., Mt. Stuart)	282099	346270
Bruce Morley (27 Salvator Place, West Hobart)	342505	308337
Cathie Plowman (Lake St. Clair)		891115
*Daniel Muskee (11 Henry St, Sorell)	651036	
Dean Morgan (17 Bellhaven St., Taroona)	279318	345061
*Greg Jordan (118 Wentworth St, South Hobart)	237446	202596
*Jean Jackson (118 Wentworth St, South Hobart)	237446	333791
Jeff Butt (22 Clutha Place, South Hobart)	238620	325302
Jol Desmarchelier (29 Cromwell St., Battery Pt.)	235016	
Luke Van Zino (27C Cromwell St., Battery Pt.)	235371	
*Mark Doyle (3/282 Sandy Bay Rd., Sandy Bay)	235389	202788
Mick Williams (Police Point)	976368	
*Russell Fulton (Flat 2, 1 Cato Ave., West Hobart)	347619	207446
Sarah Boyle (22 Clutha Place, South Hobart)	238620	336321
Sue Baker (1/84 Federal St., North Hobart)	313105	338153
Tim Anderson (Jane Franklin Hall, South Hobart)	217189	232000
Vaughan Andrews (240A Churchill Ave, Sandy Bay)	252063	215362

(* Your 1995/6 SUBSCRIPTIONS ARE NOW LONG OVER DUE!!)

Classifieds

>>Have you got anything to sell? If so, contact the editors for a free plug.<<

Cumbrian fibre-pile bunny suit, worn once only, too hot for caves in NSW!! Fits person about 175 cm tall. \$80. Also one pair **Bata Dairy boots**, size 8. Only worn a few times and yours for \$25. Contact Jeff, 238620 (h) or 325302 (w).

Petzl Croll (chest) and Expedition (right-hand) ascenders. Driven by a careful lady and only on a couple of Sundays! As new condition, \$120 the set. Also, **one pair Black-Diamond Valmonte-X cross-country skis** (200 cm) with Black Diamond bindings. Good condition, \$350. Contact Jean on 237446 (h/w).

BACK COPIES of the SOUTHERN CAVER are available. Loads of good information for not much. Let us know what you want, via SCS, P O Box 121, Moonah, 7009.

COMING IN **SOUTHERN CAVER, Number 60**, planned for early in 1996. Articles include:

- Drafting surveys on the computer, how it's done and some hints for a good product,
- Problem Pot/Burning down the House (JF402)-the real story, including discovery of a connection to JF228 and the complete survey,
- Surveys of some small caves, including JF234 (Sump Pot), IB137, and
- A review of some cave survey software for the Macintosh (CAVEPLOT and TOPOROBOT),
- an overview of work on Threefortyone (JF341) and prospects for the future.
- and more.

YOU can SUBSCRIBE to the SOUTHERN CAVER for \$4 per issue, post paid!

<> SCS WAREHOUSE SALES <>

Did you know that we have the following for sale? There are some hard to beat prices here! Also the small profits go into the club coffers, so you benefit twice. Have a good look at our range.

>>>> NEW STOCKS HAVE ARRIVED <<<<<

NEW STOCKS

- >>>> Yuasa 6.7 Gel Cells (6 V, 7 AHr, weighs 1.3 kg. Gives you 14 hours of bright light (3 W) or many more hours on Low Beam! \$25.00 each
- >>>> Duracell 4.5Volt flatpack batteries. Very fresh (best by Jan 1999!) \$7.00 each, or 3 for \$20.00
- >>>> 5 cm flat tape (ideal for harnesses, rigging, gear bags, battery belts etc.) (Royal Blue) \$1.50 per m
- >>>> 9 mm Beal dynamic rope (ideal for cows tails, safety loop) \$3.50 per m
- >>>> Construction workers helmet, complete with metal light bracket and chin strap. (how old and dodgy is your own helmet??) \$20.00 each

and the REGULAR ITEMS

- >>>> Plastic light brackets (with fittings) for helmets \$3.00 each
- >>>> Jets (21 litres/hr) for petzl kaboom \$5.00 each
- >>>> Charging sets (clip, key and ammeter), build your own charger! \$8.00 each
- >>>> Elastic chin straps for hard hats \$0.50 each
- >>>> Miscellaneous second hand pieces for Oldham headpieces. Contact us for details.
- >>>> 2.5 cm flat tape (ideal for handlines, rigging, gear bags, battery belts etc.) (White) \$0.80 per m
- >>>> CARBIDE NOTE: CARBIDE MUST BE USED RESPONSIBLY! \$3.50 per kg
- >>>> 6 volt bulbs to suit the above Gel Cells a variety of Wattages (1, 1.5, 2, 3) are available from \$1.00 to \$2.50 each
- >>>> Female spade connectors to suit Gel Cell Terminals \$0.20 each
- >>>> Metal light brackets (with fittings) for helmets \$5.00 each
- >>>> 8 mm alloy D Maillons, ideal for main harness 'krabs' \$16.00 each
- >>>> Methyated spirits, (stove fuel), refill your empty containers. \$2.50 per litre

When you need any of the above please contact Jeff Butt on (002) 325302 (W) or (002) 238620 (H), or write to us: SOUTHERN CAVING SOCIETY, P. O. BOX 121, MOONAH 7009.

<> SCS WAREHOUSE SALES <>

RELIABLE LIGHTS for HIRE. CHEAP GEAR for SALE-see the BACK PAGE!