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Lumen in Tenebris

SUSS

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E D I T O R I A L

Aga in another good issue. This issue contains many informative articles. Firstly, the constitutional amendment below is required in view of the decision made at the last AGM when there was a call for Family Membership. This was something which the Society did not include in its constitution at that date. We hope that the amendment will be passed and that some of our members may benifit.

The article by Geoff Francis on Manus PNG is the abstract of the paper which he presented at the recent ASF Conference in Canberra and I urge readers to study the article carefully.

Peter Campbell's second article in his continueing series on SRT is on Karabiners. In his article he makes a good summary of most of what is known about Karabiners, drawing together information from many sources. I hope that this article is read by all members who either have karabiners, or who may soon be buying them. By reading this article you may learn something about the karabiners that you have or prevent your making an unwise purchase. It is pleasing to note that the ASF Cave Safety Commission is now in the process of carrying out tests on SRT gear in conjunction with the NSW Cave Rescue Group. Persons who have equipment that they are prepared to donate for testing are urged to get it to Philip Toomer, ph 929.0432.

The report on the ASF Conference, & the pre and post conference trip reports included in tis issue tends to show how important the ASF Conferences are to us. We can become a little isolated, even here in Sydney, and there is nothing like anASF conference for broadening ones outlook. Conferences are not just the formal sessions or the field trips, but as well there are hours of informal discussions & get togethers, and all these parts of an ASF conference help to produce better speleos. If you didn't get to the last one, then make every effort to attend the next one which will be held in Western Australia in early January 1979.

Happy reading.

Bruce Welch

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Notice of Constitutional Amendment to be voted on at the AGM

" Two or more related Full or Associate Members may on payment of a Family Membership Fee receive a single subscription to prescribed publications while retaining their previous individual membership status."

NOTE:- Should this motion be passed, it will be made retrospective for 1976/77 and will be fixed at $9. In view of the discussion at the Cavconact ASF Committee Meeting, SUSS will modify its ASF membership requirement. While all voting (Full or Associate) members must still be members of the ASF, if this has already been done through another society, the member will not be required to subscribe to a further ASF Newsletter, and this saving will then be deducted from the membership fee.

Peter Winglee

CAVES IN THE QUATERNARY RAISED REEFS OF EASTERN MANUS, PAPUA NEW GUINEA

G. Francis

Abstract

There are at least 18 known caves in the raised reefs of Eastern Manus. These range from small single chambers to complex systems with up to 500m of passages developed on more than one level. All caves appear to be of phreatic origin but in some cases bedrock morphology is obscured by sediments, speleothems or breakdown. Loniu Cave contains ferruginous phosphate deposits thought to have formed through chemical reactions between bat guano and sesquioxides which were previously concentrated along partings and fractures by pressure solution. Cave development was initiated when the sea stood at higher levels and has been influenced by eustatic and tectonic sea level changes. Several caves have water filled lower levels where phreatic solution is now taking place. In the narrow raised reefs groundwater is brackish or saline whereas in more extensive reefs groundwater is usually fresh but may become brackish during relatively dry periods. Limited data obtained from water analyses suggests that brackish and saline waters are sometimes capable of limestone solution. Although cave formation was preceded by substantial diagenetic changes in the reef limestones no sharp distinction can be drawn between diagenesis and karst development. Cave forms are controlled largely by the distinctive geological structures of Eastern Manus but there is little relationship between surface and underground karst morphology. Most of the caves originally developed without penetrable entrances and have only become accessible through through being partially collapsed or exposed by backwearing of the limestone slopes. As percolation waters are usually saturated or supersaturated, cave genesis under these conditions requires processes by which water that has entered the limestone can regain aggressiveness on reaching the water table. The available evidence suggests that "rejuvenated aggressiveness" caused by mixing of ground and percolation waters with different Ca/Mg ratios may be involved. Other possible complementary effects are under-saturation produced by mixing of waters with different chloride concentrations and the "mixing corrosion" proposed by Bogli. These phenomena could be responsible for the development of solutional forms such as bellholes.

Peter Campbell

Karabiners

These, also known as snap-links, or krabs, are one of the most developed of all S.R.T. equipment and the one about which we know the most. There are almost no excuses for having accidents due to Karabiner failure. In fact, there appear to be only two recorded caving accidents where Karabiner failure has occured. One of these was due to using a Karabiner known to be faulty (kept for "sentimental attachment") 1*. I have no further information about the more recent accident.2*.

Karabiners which meet U.I.A.A. (Union Internationale des Associations d'Alpinisme) carry a stamp:

if they meet the specifications laid down by this body 3*. Reputable brands include Stubai, Clog, Asmu and Hiat.

Materials - forged aluminium alloy, steel, and chrome vanadium Karabiners.

-forged aluminium alloy can be as strong or stronger than all but the large steel Krabs 3*.

-chrome vanadium and steel are heavier than alloy. The Stubai 5000 chrome vanadium Karabiner, is the strongest on the market with a breaking stain in excess of 5000kg.

-the Stubai big D closely approaches its breaking strain of 4000kg (3788kg) 3*

Disadvantages of various materials -steel- rusts, must be carefully oiled: rust may cause a loss of up to 40% of strength 4*. Clearly a problem in wet caving over extended periods. Weight a problem.

- alloy - soft, therefore worn readily if used for cross-Karabiner method of abseiling.

- chrome vanadium - weight and price its only disadvantage.

Construction -

Profile - steel Karabiners are limited to a circular profile. The forged type, eg. Stubai 2200 kg alloy or 5000kg chrome vanadium, have a brace along the long axis and along the ends.

Latch on gate- three types: pin latch ,(fig1), strongest form without a screw sleeve on the gate, almost twice as strong as a flat latch, fig2), or a tongue latch (fig3), on a Karabiner of otherwise identical design 5*.

3 Screw sleeve on gate with pin-latch design the function of the screw sleeve is to keep the gate closed even though the gate "locks" when under load. In other designs -with flat and tounge latch, functi= is to keep gate closed and contribute the strength e.g. Stubai big D- Breaking strain with keeper closed -

Screw undone	screw done up	
1373 kg	3788 kg.	3*

Screw sleeve - the threaded type on a threaded keeper is stronger and more durable than a threaded screw which moves on a pin. 6*

4 Keeper - The spring on Stubai's appears superior to those on Hiatts (in my own experience). It is stronger and does not jam open. This may be of value in a emergency. Keeper clearance when open is a worth while consideration, and is a result of minor axis length; for example Stubai Big D. Having an angled keeper reduces the possibility of loading the minor axis which is much weaker than the major axis- often less than one third of the specified strength. 3*

5 Shape Karabiners with the keeper on the shorter of two sides are stronger than, for example, Stubai Oval - which places the load equally on the two sides, one of which has the weakness of a gate. 8*

6 Shock Loading 3* Bent wire krabs may fail below Uiaa standard in the impact test. Good krabs easily exceed the test and the Stubai big D shows up as an extremely impact resistant karabiner. Some fall off (less than 10%) in performance occurs when at -30° centigrade.

Buying Karabiners -

Perkins 8* states that krabs must be stronger than any of your ropes or webbing. Dunster 3* believes that 3,000 kg "should be quite enough for all legitimate purposes". My personal opinion is that a 5,000 kg. krab is psych ologically reassuring, and not much more expensive than other types.

Buy a well known brand like those mentioned previously.

Avoid like the plague, those which manufacturers will not put their name to. The best have details of strength stamped on the krab and or carry the U.I.A.A. stamp. If weight and cost are unimportant buy chrome vanadium. For lighter but perfectly adequate krabs buy reputable aluminium alloy e.g. Stubai 2,200 or clog alloy krabs. If you are prepared to maintain them the big Asmu and Stubai big D are very good steel krabs. Have round profile steel, or chrome vanadium karabiners for abseiling. 7* Unless you intend using some karabiners for rock climbing, buy only those with screw gates. Don't buy second hand karabiners unless you know their history.

Looking after Karabiners

Keep gates oiled for smooth closing. Store steel krabs with a film of oil - don't forget to remove it when you are going to use them. Avoid dropping krabs - there is little known about what effect this has on their performance. Discard all marked karabiners which are dropped, and use for hauling only. The two theories available are that dropping may produce fractures in what is a fairly brittle material, or that dropping is only analagous to work hardening and so of no consequence 8*. At present the lack of evidence would indicate caution. Colour code or engrave your karabiners for identification. In spite of what is said 8*, initials should not be stamped on the keeper since in many types this is the point of initial failure 3*

What research is there to be done into karabiners?

We know nothing about what effect sub-maximal shock loads, or dropping has on karabiners. There is no quantitative data on rust. New developments may result in tubular profile karabiners with a consequent larger radius of curvature of the rope, with its obvious advantages.

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6*	Toop G.J.	Down under 13 (1):8
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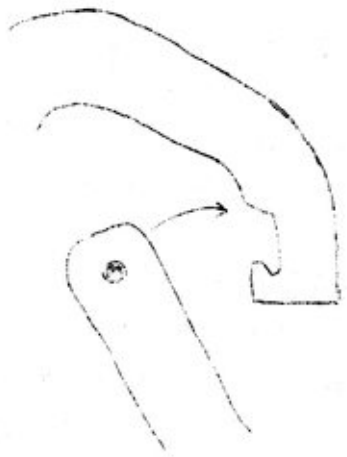


Figure 1

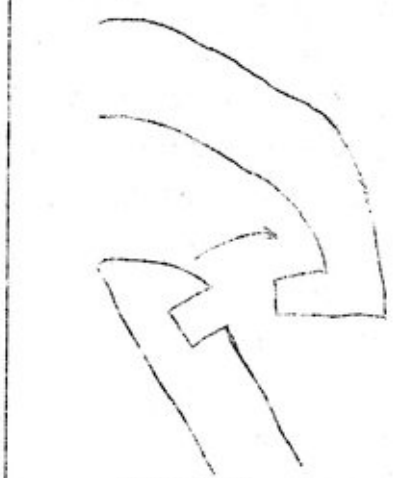


Figure 2

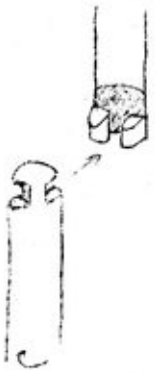
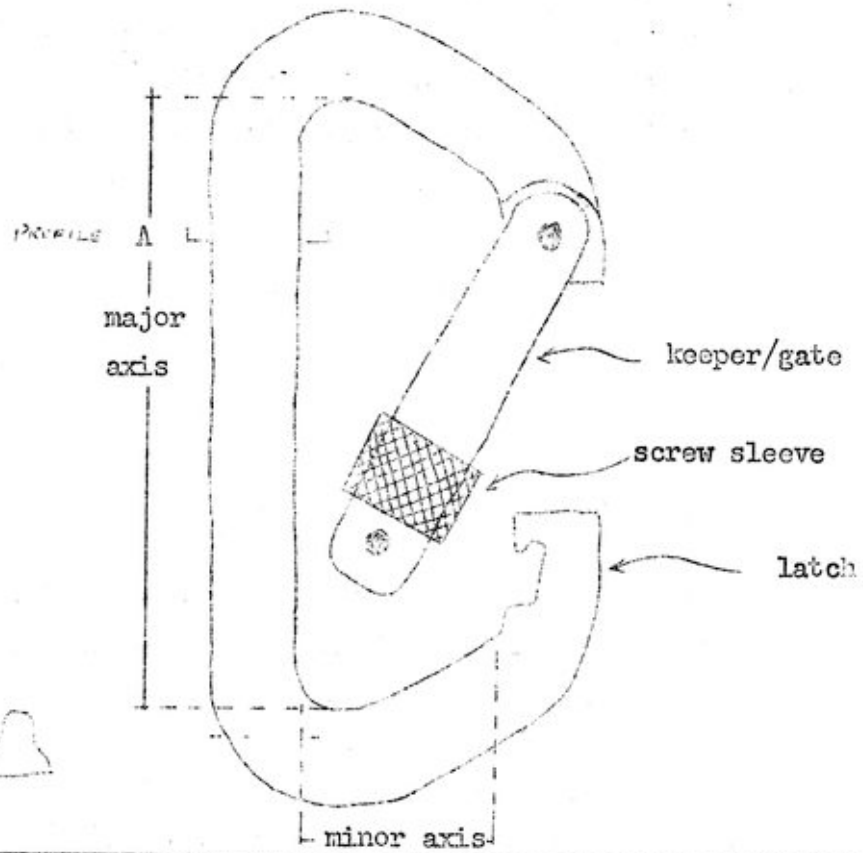


Figure 3



Book Review: THE CAVES OF JENOLAN 2: THE NORTHERN LIMESTONE

Edited by B.R.Welch, published by Sydney University Speleological Society. Price $5.

Guy Cox

In 1971 S.U.S.S. published "The Exploration and Speleogeography of Mammoth Cave, Jenolan", which has now become a minor classic. The present work turns the Mammoth book, post facto, into the first of a series . Its topic is the remaining caves of the McKeowms Creek hydrological system - the Northern Limestone of the title is really a misnomer since the limestone outcrop is continuous through into the Camp Creek hydrological system (the so-called Southern Limestone). In fact the two systems are linked by the Grand Arch, since until geologically recent times the confluence (now at Blue Lake) was underground.

The lack of a precise boundary has led to some idiocies in the first section, in which several entrances to the Devils Coach House and Imperial Cave are described and surveyed, but the main caves are not. These two major caves are part of the same hydrological system, but are much too large to be included in this already hefty book. It would have made more sense to omit these entrances, leaving them for inclusion in some future "Northern Show Caves" volume.

The same problem of space has meant that Wiburds Lake Cave is shown only as a 1:1000 silhouette. Otherwise, surveys of all the caves are presented at scales of 1:200 or 1:100, together with concise descriptions. Some very valuable silhouettes show the relative positions of cave systems - one, for instance, relates the caves of the Serpentine area to each other and to the further reaches of Mammoth. In fact more such diagrams might have been more use than, for example, the three cave surveys which take up p.91, for none of the caves exceed 3 metres in length.

Descriptions and surveys make up the bulk of the book, but the first section consists of historical geological and geomorphological articles, with an area map, a geological map and diagrams of the hydrology

The whole book is superbly produced, the maps and cave surveys are beautifully drawn, the text well laid out and printed. The photographs are magnificent, numerous and comprehensive. Very few single cave clubs in the world have published books as well produced as this - I can think of only a couple of comparable examples.

The book is, as already mentioned, large - 141 quarto pages. At over twice the size of the Mammoth book and under twice the price it must be a bargain in these inflationary times. In fact, $5 will buy you nothing comparable in quality or quantity in the Australian speleological literature market.

GUESS WHAT CAVES ?

Peter Campbell

"We intended to go to Wiburd's Lake Cave. However, along the line some-where, we ended up in an unstable cave halfway up the ridge. So, having gotten that far, we explored the thing to see where it went.

The cave had a few hairy drops in places, but we still pushed on, until a 20ft drop stopped up dead in our tracks. A huge rock that looked as though it would hold me, didn't, so we gave up trying to climb down that way. Andy had to be hauled out of a small hole in the passage floor that he thought he could get through. Oh! well such is life.

Was this dangerous, unstable cave going to stop the intrepi[illegible] explorers? (a few minutes later saw us back on the surface before the whole thing caved in.) If at first you don't succeed, give up. At least until you have more gear at hand.

Andy and a few of his mates poked around in a small cave on the creek level, but had a fight with a large boulder blocking the passage, (the boulder won) ."

Reference

Chin L. J.S.S.S. 15 (11) : 15 1971

Perhaps this is Barbo Cave (on Hibberds Bluff, Jenolan)? (ed)

NOTES ON CAVING AREAS IN N.S.W. for the use of 1977 prospective members.

Peter Campbell.

The main areas which SUSS cave at with any regularity are Jenolan, Bungonia, Yarrangobilly, Cliefden, Wyanbene, & Wee Jasper.

JENOLAN

- A Tourist area:- permit required, limit of 12.
- Mainly horizontal caving with some (optional) vertical elements.
- Formation-wise very scenic & worth taking the camera.
- Activities:- exploration, surface & underground surveying, photography, biospeleology, conservation work, documentation, digging, hydrology.
- Potential - still many leads for new discoveries.
- Camping - water supply, swimming hole, bring your tent & sleeping gear.
- People to contact - only SUSS Trip Leaders (esp. Bruce Welch .929.0432).
- Transport - 3 hours by car (or train to Mt Victoria then push bike 60km).

BUNGONIA

- Free access to all yobbo's.
- Vertical caves of considerable aesthetic beauty, one or two 'horizontal'.
- Very scenic surface area (esp. Bungonia Gorge) except for the accursed quarry.
- Caves fairly reamed out by vandals but still some worthwhile formation.
- Activities - mainly touristing & festering around, or go bushwalking and canyoning.
- Potential fairly limited but still some digging might reveal something.
- Camping - no water supply, bring your own camping gear.
- People to contact - any SUSS Trip Leader (esp. Tony Austin 750.7785)
- Transport - 3 hours, by car.

YARRANGOBILLY

- N.P.& W.S. permit area, limit of 12.
- variety of horizontal & vertical caves in a 12km belt of limestone.
- Formation-wise very scenic.
- Activities - mainly assisting CSS & UNSWSS activities via the YRG in documentation, surveying, exploration, hydrology, photography, with some touristing in the Tourist Area.
- Potential still quite vast.
- Camping - water supply, gets very cold in winter, if with YRG-use of house, but be prepared to camp out.
- People to contact - any SUSS Trip Leader (esp. Peter Winglee 83.9182, and Randall King 969. 4543).
- Transport - 7 hours by car - usually a long weekend.

CLIEFDEN

- Controlled by OSS, privately owned, permit required, limit of 12.
- Horizontal caving, a very pleasant area.
- Very scenic formation-wise.
- Activities - assisting UNSWSS with documentation, surveying & exploration.
- Potential - limited, but still exists - mainly digs & wandering around in Taplow Maze.
- Threatened by dam for Bathurst-Orange Growth Centre.
- Camping in a hut.
- People to contact - any SUSS Trip Leader (esp. Randall King 969.4543)
- Transport - 3-4 hours by car.

WYANBENE

- Non-permit area,
- Horizontal cave, but with vertical gunbarrel aven as yet unclimbed.
- Some reasonable formation + Big Hole nearby to look down (& descend if keen).
- Activities- touristing or assisting ISS with baloon photography if there.
- Potential is limited.
- Camping - water supply, bring tents.
- Contact any SUSS Trip Leader (esp. Graeme Smith 524.6447 or Tony Austin 750.7785).
- Transport 4½ hours by car (+ walk if river is in flood).

WEE JASPER

- No control.
- Horizontal & vertical caving.
- Formations mostly removed by yobbo's
- Activities - touristing in still worthwhile caves, photography,watching yobbo's trying to kill themselves.
- Potential - perhaps some digging.
- Camping - water supply, bring tents, don't forget to pay council for camping (if asked).
- People to contact - any SUSS Trip Leader (esp. Tony Austin 750.7785).
- Transport 4-5 hours by car.

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S U S S F i e l d D a y - Sunday 6MAR77

This year the traditional SUSS Field Day will take on a different face. The day will be spent in the Northern Beaches Area, starting with some visits to a few of the rather magnificent sea caves in this area. Trips will be made to St Michaels Sea Cave and to The Ovens. Both of these caves are in the headland between Avalon Beach and Whale Beach. Lights will be required although other caving gear will not (suggested gear is bathers & candles). Perhaps we ma y also visit Bilgola Sea Cave. The remainder of the day will be spent, no doubt, surfing & sunning on the beautiful northern beaches. When everyone gets hungry we will adjourn to either Randal Kings or Bruce Welchs place for a Barbeque (bring your own meat & grog - salad supplied). When everyone is suitable primed, those who are keen will be going on a draining tripthrough the extensive drains of Sydney.

Arrangements:

Those who wish to drive straight out should meet at Avalon on Barrenjoey Road near the Police station (just before the Fire station) at 12.00 .

Those requiring transport should wait at the Wynyard Park entrance to Wynyard Station at 11.00am. Note the last car will leave here at 11.15 sharp. Those wishing to enjoy the marvelous bus trip (1½ hours) should catch a 188, 189 or 190 bus from Wynyard, & get off at the main Avalon bus stop(12.00).

If you require transport, or further information, please contact Peter Winglee on 83.9182 .

Bruce Welch

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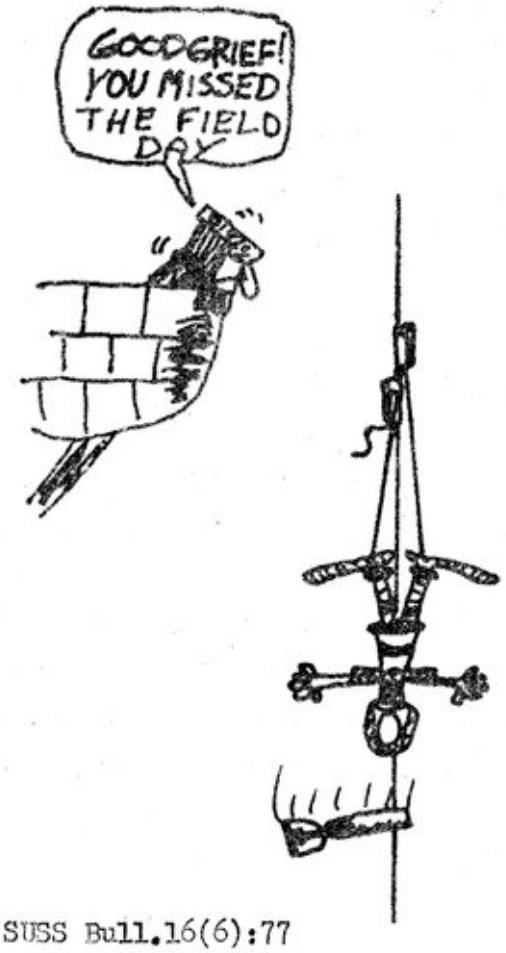

PETER CAMPBELL
S.U.S.S. Librarian.

Niugini Caver : Vol 4 No.3 This excellent issue details the 1975 Lelet Plateau expedition in New Ireland. The revered Henry Shannon, Guru of the present S.U.S.S. generation, was a participant along with 7 other notable cavers. Permanent and thorough documentation of 92 caves up to 102m deep or 500m long in an area with a depth potential of1200m was carried out in a month-long expedition in July-Aug '75. Geology, Hydrology, Surveying, Biology and Logistics are considered to varying degrees. The photographs didn't all come out well but the maps are excellent. Use of common orientation, A.S.F. Survey Grades and metric scales set the standard for all expeditions.

SPELEOLOGIA EMILIANA 3/4 - includes articles on cave ecology, pollution and again MAD - the Motorised Ascending Device - this time with a photo taken closer up, showing a petrol engine attached to some device which presumably winds up ropes. Apart from mentions of mangled Jumars and several different 15kg weights, the rest of the artic is undecipherable to a true blue like myself. I wish someone could translate for me.

N.S.S. News Aug 1976
This details the use of Gibbs Ascenders in a spring-loaded form to act as emergency brakes on abseils. A useful by-product is information on the results of shockloads transmitted by Gibbs onto dynamic and static ropes. The cam is held in the open position by a spring clip which is released by pulling a cord strapped to the chest, or by over balancing.

N.S.S. NEWS Nov 1976 - a special issue on some aspects of cave restoration deals with work to remove graffitti with dilute HCl, marking tracks with rocks, cleaning flowstone with water and scrubbing brushes and clearing up carbide. The report by Doug Rhodes is very heartening although I was amazed myself by his attitude to those who proclaim- "No conservation tracks and signs. They don't look natural". It is interesting also to see that if you wrote your name on a cave wall 50 years ago, regardless of being the discoverer, it is in fact illegal in New Mexico for anyone to remove it. The cave being restored was

Fort Stanton Cave. The glueing of stalactites and stalagmites with epoxy cement is mentioned with a warning to leave the central "root" canal clear of cement. An interesting accident is detailed in the Safety, Techniques Section article. A caver dropped a disposable butane lighter down a pitch and it almost blew up in the face of his companion who was fortunately clear of the explosion. I think that this is God's way of saying that people should not smoke in caves. It is also mentioned in Notes and News that Nuova Speleolgia is being sued by the Italian Excursionist Federation for criticising this organization for charging $30 entrance fees for the right to go into Spluga della Preta - a deep Italian cave.

U.I.S. Bulletin 1(13) 1976 details in English the N.S.S. Policy for cave conservation. This seems to have similar aims as the A.S.F. policy but also has the unfortunate aim of abolishing the speleothem trade which occurs in the U.S.A. The hyper-reactionary conservationists of the U.S.A. who want all speleo-publications banned are mentioned. They boast that they haven't been in a cave for years. Cave diving has considerable emphasis in U.I.S. Details of "Papua New Guinea Speleological Expedition 1973" ie J.James and Co's book is listed under "New Books".

Announcing the

S P E C I A L C A V I N G F I L M S H O W

Tuesday March 1st, 1977.

6.00pm in the Carslaw Lecture Theatre No.7,
SYDNEY UNIVERSITY

The films to be shown are:-

* Castleguard - First public showing - the best caving film in the world.
* "First Light" - In the caves of N. Spain, directed by Guy Cox. (ex OUCC)
* Kubla Khan - World premier - sneak preview of THE Australian Caving Film. Yes, this will be the very first showing of this film which was directed by Andrew Pavey.

DON'T MISS THIS FILM SHOW - especially since the Castleguard film must go back to Canada by the middle of March - so if you miss it you will be very sorry. Believe me, this film is good; in fact I would put it into the class of the better commercial films (ie those you see in the cinema)

Due to the postage costs involved in getting the Castleguard & Spanish films and the hire of the lecture theatre, an admission fee of $1-00 will be charged.

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C A V C O N A C T 7 6

ASF CONFERENCE, Australian National University, Canberra 27-30DEC76.

Randall King.

SUSS Attenders (from past & present generations)

Ted Anderson, Tony Austin, Steve Bunton, Guy Cox, John & Jeanette Dunkley, Geoff Francis, Paul Greenfield, Kathy Handel, Gerry & Genny Hopkins, Geoff Innes, Randall King, Ludwig Reider, Henry Shannon, Graeme Smith, Philip Toomer, Bruce Welch, Peter Winglee (+ Rob Kay - SUSS -UK).

For the occasion of the CAVCONACT Conference in Canberra this last Christmas, SUSS managed to proffer 21 speleos to make a formidable showing, (although some of those mentioned above attended also in their capacity as dual members of other clubs). A "BOMB" time was had by all (read on.....).

An ASF Biennial Conference is the ideal occasion on which to make an anthropological study of that strange species - the SPELEO. For example, Conferences draw out from the woodwork in epidemic proportions many of the retired geriatric armchair speleos, who are usually heard but not seen. Identification and classification of such can easily be made by the number of times their statements are preceded by "I remember the time when ..." or by their constant references to carbide lamps, beanies and ladders. The academic armchair speleos are another group who usually put up a good showing here; and of course that other breed - the political committee-armchair speleo. It is this spectacle of people from the depths of society that always makes 'The Conference' a worthwhile experience. Burgman College had never before been subjected to such an experience of internal speleo-sporting from the 170 Australian cavers who attended!

Seriously speaking though, CAVCONACT claimed a triumph in organisation by the host societies CSS and NUCC, and undoubtedly will be remembered as one of the most succeseful conferences ever. The papers presented over the four days were all of an excellant standard and were representative of a wide diversity of topics. Papers by SUSS Members were:-

"Human Impact and its Management in Caves" Ludwig Rieder

"Measurement of Relative and Absolute Water Table Levels in Nullarbor Caves" Ted Anderson.

"Caves in the Quaternary Raised Reefs of Eastern Manus, PNG." Geoff Francis.

" Atea Kanada, PNG" Randall King

" Micro Organisms on Cave Walls in the Deep Twilight Zone." Guy Cox.

"Silverfish in Australian Caves." Graeme Smith.

In fact, I only rated three of the total number of Conference papers as being worthy of venturing next door to watch climbing films (no names mentioned until new libel reform legislation takes effect). This speaks for its self. A copy

of the Conference proceedings when they emerge should be a most worthwhile investment, even for those who didn't attend.

The "Cavemans Dinner" lived up to high expectations, although it appeared that no one had bothered to tell UNSWSS that NIDICON has gone..... four years ago. Still, for a society living in the past, they put on a good performance for the mighty UNSWSS-SUSS annual bun fight. Of courde they did not surpass the high standard of bun throwing as demonstrated by us much practiced SUSS members. Nick White, as President of ASF, presented a standing target to allow bun throwers to establish their credentials, when trying to make an after dinner speech, before the night finally transended to the common drunken revelry.

Speleosports was won by a team from the University of Queensland Speleos, including the indominable Henry("SUSS life members are expected to perform") Shannon. All of those who did partake in speleosports can verify that this was definitely not an activity for the armchair caver. People were heard to comment that the reason UQSS won was because they don't have any caves left in Queensland thus they were fresh for speleosports at the Conference. SUSS entered 3 speleosports teams, and scored places within the first 15 teams. Tony Austin managed to break the egg (our "fragile object" for the course) before we even started! However, SUSS hogged the limelight from the two TV crews who turned up to film the event, and became instant film stars on the news that evening. The Corinda Armchair Caving Team was awarded last place after a fine effort of deck-chair-siting, primus-stove-billy-boiling and tea drinking. Total time for the course - 26 hours; 2 hours for the course and 24 hours in penalties for not attempting any obstacles.

Another notable episode from the Conference was the first speleological investigation of the Burgman College laundry chute. The building manager wasn't too impressed at our scientific curiosity when we were discovered belaying a c caver in full trog gear out of the "entrance" on the fourth floor. Luckilly he'll have a few years to recover before the next conference.

The spontaneous theme of the conference was undoubtedly the creation of the ultimate weapon against all speakers - the chorus of "BORING" and "DULL" was used to greet the slightest pomposity or straying from the subject. Caving meetings throughout Australia could well be revolutionised.

To conclude, SUSS wishes to express its gratitude to the organisers of the Conference, in particular Marj Coggan, John Brush, Bob Nicoll, Andy Spate, John Masala, Judy Bateman, Frank Bergeson and the unnamed others who contributed to make CAVCONACT 76 the memorable experience it was.

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PRE-CONFERENCE FIELD TRIP

Jenolan 18-24DEC76

B. Welch

Abstract

Geomorphological & fossil investigations in Wiburds Lake Cave, Hennings Cave, McKeowns Hole, Little Canyon Cave & Diggins Diggins Cave. Visit to Lower River & Upper Oolite, & investigation of the end of the Infinite Crawl in Mammoth Cave. Conservation measures in Upper Oolite praised. Spider Cave digging resulted in breakthrough into small chamber with rockfall. Geomorphological & exploratory trip into Mammoth Cave - Ice Pick Lake, Naked Lady Chamber, Hell Hole & the end of the Railway Tunnel visited.

Present: B. Welch(SUSS), J.Webb(UQSS), H.Tew(UQSS) & later H. Shannon(SUSS,UQSS).

Saturday was commenced with a visit to Wiburds Lake Cave in which the upper levels near the entrance were explored as well as 22 Passage and the main Western Passage. The geomorphology of the cave was discussed, in particular the dykes at the start of 22 Passage, and two faults were identified in 22 Passage.

Numerous types of fossils were also observed in this passage and this inspired us to have a look at the fossils in Hennings Cave, McKeowns Hole, Little Canyon Cave & Diggins Diggins Cave on the way back down the valley. John Webb will write a separate report on these fossils. The most notable fossil was an excellent specimen of a stromataporid in Hennings Cave. Recent bat droppings were observed in McKeowns Hole, but no bats.

Nine Hours were spent in Mammoth Cave on Sunday. Again fossils were examined and a visit was made to Upper Oolite. We were only the second party to visit this section since Peter Campbell (SUSS) installed conservation measures here. These conservation measures are absolutely magnificent and set a very good example for others to follow - we must preserve our caves. It is now possible for small parties to visit this well decorated section without causing any damage and obviates the need to close this section off altogether. But please, if you have already seen this section - one visit is enough.

After leaving Oolite we moved on up to the Infinite Crawl and Bruce pushed the gravel tubes at the end thereof. The passage extends some distance past the last SSS survey point - but not the 200 feet reported in the Mammoth Book - perhaps 50 feet! Bruce pushed down a tight gravelly tube (feet first) till a water filled sump was reached. This was not passable and there was no breeze present. It is not certain whether this is the "narrow sandy U-tube" that Dick Williamson (SSS) passed in 1970 (Ellis 1970 Stop Press 14(5):119-120) - perhaps not. In drier conditions this sump could be passed with some digging. As we could not find the way into the North West Passage, we returned via the Infinite Crawl (something our knees could have done without).

Monday was spent surface trogging & visiting Tourist Caves. Tuesday was spent digging in Spider Cave, and after resuming on Wednesday a breakthrough was made - up a long tight gravel-floored tube; Bruce got a bruise on his sternim from a presstud on his overalls; needless to say the others didn't follow.. Up the slope Bruce squeezed - then it opened out - the roof went straight up - beautiful clean waterworn limestone then - oh no - behind him a rockpile. It extends up into the roof and to the right and to the left. However it is clean open rockpile with a gravely strem bed running through it, so there is hope yet. The draft through the last dig was very strong so no doubt there is more cave to be discovered yet. Bruce pushed around in the rockpile a bit, but with little bits dropping off he decided not to push too hard. Hairy Diprotodon - here we come.

Following the arrival of Henry Shannon on Thursday night from Brisbane we all went into Mammoth Cave on Friday for some geomorphologising . We journeyed down the Unsurveyed Connection and on to Ice Pick Lake. Some side passages were explored, and then we decided to go up to the Railway Tunnel via the Naked Lady Chamber and the Hell Hole.

What a trip - after a somewhat tricky climb up to the Naked Lady Chamber, avoiding the flowstone on the way (boots off in one section here), we procedded to get geographically embarased, Noted a passage which isn't in the Mammoth Book, however subsequent literature research has revealed that Cris Parr abseiled down this passage during Nibicon & the passage was found to lead back to the chamber near Ice Pick Lake (SUSS Bull.15(7):143).

Finally the way out of Naked Lady Chamber was found and we soon emerged into the Railway Tunnel. Henry & Bruce made their way to the end of the Railway Tunnel & decided that the rockpile at the end could still be pushed.

The whole trip into Mammoth was very interesting, we spent the whole time talking about the history of the passages we visited, as well as making hydrological, geomorphological & geological observations on the way through. Maybe that book on the hydrology of Mammoth Cave may come out one day.

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Trip Report: Cooleman Caves. "31DEC76" - "4JAN77."

Guy Cox.

Present - Guy Cox, Janet Wild, Tony & Cathy Austin, Kathy Handel, Paul Greenfield, Randall King, Rik Tunney, Geoff Innes.

A lazy post-Cavconact trip. Barber Cave on the 1st provided an interesting encounter with a local party whose ages ranged from 6 to 60 and whose equipment included a flourescent light and a plastic-covered clothesline. Rain the same day made us wonder how long our stay would be, as the roads are definitely impassable to 2-wheel-drive vehicles when wet. Next day the weather looked better and hard trips down Cooleman & Right Cooleman took place. Murrays Cave provided a suitably tough final trip on the 3rd. Zed Cave was also looked at, but somehow seemed not to suit the spirit of the occasion. All vehicles are believed to have escaped.

COOLEMAN

G.Francis

27/12/76 L. Reider, G.Francis.

A flying visit was made to get some levelling data for a geomorphological study of Frustration and New Year Caves. Because of the limited time available and the constricted passages we used a method which involved setting a Suunto Clinometer on zero and sighting onto a fairly rigid steel tape held vertically above or below the station. In near vertical passages it was necessary to project the level of a station on the sloping floor opposite, then continue upwards.

Even so there were a number of difficulties. In low roofed active stream passages it was necessary to take some sightings while lying down in the water, and Ludwig had several painful encounters with rock pendants. After one of these he likened the offending passage to a sewer. The results of the levelling show that the Frustration Cave stream has an average gradient of 1 in 15 between the first point at which it appears in the cave and the duck under downstream from the entrance shaft. The point at which the stream first appears is about 11m below the entrance tag. The stream in New Year Cave has an average gradient of 1 in 18 for the 36m of passage upstream from the entrance shaft.

Other noteworthy features were two cylindrical blind shafts near the entrance to Frustration. These are not shown on the existing S.U.S.S. map and provide evidence that the entrance may have been initiated by vadose seepage into a phreatic tube. However there has been quite a complex history of entrance developmeent with the lower part of the earlier entrance and much of the passage inside being partially filled by a deposit of limestone boulders in a dark calcerous earthy matrix. The boulders are coarsely crystalline limestone with an average grain size of 2-5cm, unlike the medium grained limestone which outcrops at the entrance. Thus the deposit has not been derived from the local breakdown but has been transported downslope and into the entrance by periglacial mass movements during the last Pleistocene cold period.

We also surveyed the first 15m of Zed Cave, the resurgence for the New Year-Frustration system. The original intention was to survey the whole cave but by this time we didn't feel enthusiastic about lying almost completely immersed in (brrrr!) water to take one and a half metre sights.

F U T U R E E V E N T S

February	New Zealand - Randall King
12-13 February	Jenolan - caving & JCHAPS Meeting - Peter Minglee
21 February	SUSS Committee Meeting - Tony Austins Place 7/1-3 Bellevue Avenue, Lakemba 750.7785 7.30pm
22-23 February	Jenolan - Guy Cox - Specimen collection & geologising
24 February	SSS Meeting - yes, this is an event - they have mooved into their new meeting rooms in Pitt Street. (399 Pitt St). Another SSS Project brought to completion.
26-27 February	SSS Search & Rescue practice at Bungonia - this one is not to be confused with the ASF NSW Liason Council one.
28 February - - 4 March	ORIENTATION WEEK - help man the stall. Don't miss the films:- Showings:- Monday 2pm; Wednesday 1pm in Carslaw Lecture Theatre No.7 - Northern Spain & Castleguard Cave.
6 March	SUSS Field Day - Northern Beaches - sea caving, surfing, Barbecue & draining - see article on page 77.
10 March	SUSS GENERAL MEETING - 7.30pm in the Gladys Marks Room, Manning House (above the Manning Bar) please note date.
12-13 March	ASF NSW Liason Council Cave Rescue Practice - Bungonia.
19-20 March	Bungonia - SUSS Freshers Trip - leaders & transport required.
7-12 April	EASTER - Jenolan - lots to do - Peter Campbell 76.8855
20 or 21 May	Jenolan - Eastern Limestone - people from all societies required - cave tagging, surface traverseeetc.
8-9 May	Cliefden - Taplow Cave - UNSWSS Permit - more surveying in Taplow Flat Cave - help break the length record at Cliefden.
Mid June to end- of September	Caving in Central England - Peter Campbell - see some of the pommy grot holes!
16-17 September	7th International Speleological Congress - Sheffield, England
AUGUST	SPAIN?- Guy Cox will be leading a trip to Spain during the last 3 weeks of August - in search of the deepest cave in the world (suck eggs you New Guinea-ites)
SUSS MEETINGS -	2nd Thursday of each month (except for March) ie. April 14; May 12; June 9; July 14; August 11.

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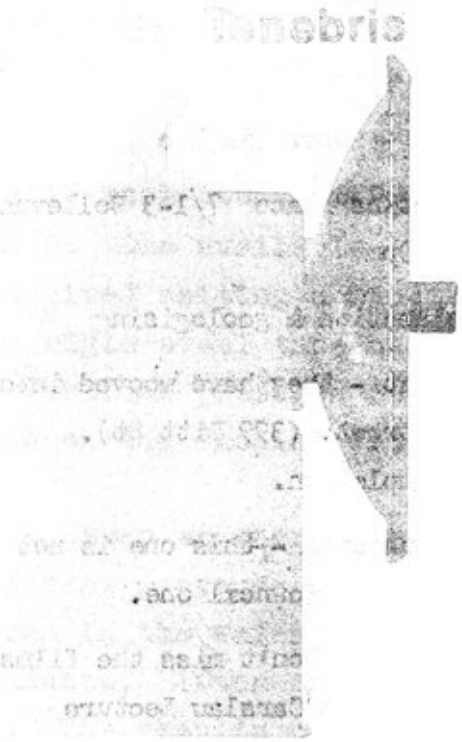

SUSS

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