BULLETIN OF THE SYDNEY UNIVERSITY SPELEOLOGICAL SOCIETY

Lumen in Tenebris

SUSS

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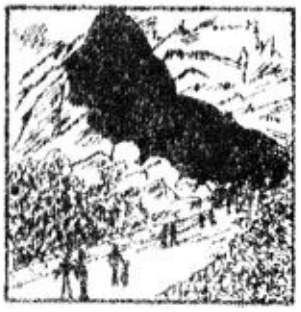
Special



Jenolan

Issue

FUTURE TRIPS.

February 1976:

25 NSW Cave Rescue Group General Meeting. 176 William St, Yankstown.

29 SUSS Field Day - Waroonga Rocks - BBQ following. 73.2028.

March 1976:

4 SUSS General Meeting. 7.30pm Cullen Room. S.U. Union.

6-7 Wyanbene Caves - Freshers Trip # 1. Tony Austin. 750.7785.

13-14 Bungonia Caves - Freshers Trip # 2. Tony Austin. 750.7785.

27-28 Jenolan Caves - Diving & conservation. S.Welch 929.0432.

22 SUSS Committee Meeting. 7/1-3 Bellevue Ave, Lakemba.

April 1976:

1 SUSS General Meeting. Cullen Room, S.U. Union 7.30pm

? Liason Council Meeting - Sometime.

? Jenolan - Water Sampling for analysis program. M.Handel 73.2028

May 1976:

6 SUSS General Meeting.

8-9 Jenolan. (also J.C.H.A.P.S. Meeting) S.Welch 929.0432

June 1976:

3 SUSS General Meeting.

NOTE: If you want to go to any special area not listed above then simply say so - either to any committee member or trip leader.

Members are reminded that for permit areas (eg. Jenolan) participants names are required by the trip leader at least 2 weeks beforehand.

EASTER - as yet there is no trip organised for this weekend. Could be water tracing at Jenolan as that would require a long weekend.

B.M.

JENOLAN CAVES

B. Welch.

The Jenolan Caves themselves need no introduction, the tourist caves are renowned throughout the world. However Jenolan has much to offer the speleologist which is equally exciting and challenging.

The largest non-tourist caves are the Mammoth Cave (3600 metres) and Wiburds Lake Cave (2000 metres), yet these are only two of over 250 known caves in the area.

The scope for work in the area is unlimited, with speleos eternally looking for a way to many miles of cave which it is known must exist linking the known caves. Other activities offered are digging, surveying, photography, exploration of known caves, and searching for new caves.

SUSS has been working at Jenolan since the late 1940's, when the society was formed. The area has received a lot of attention in the last year, with trips almost every weekend, yet it is so easyto become enthusiastic about the caves at Jenolan and often numbers have to be limited to comply with Tourist Department requirements.

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WYANBENE

G. Smith.

Wyanbene Caves are located about 30 miles (48Km) south of Braidwood near Krawarree. The road to the caves may be impassable in wet weather as it is muddy and the Shoalhaven must be forded.

The cave has 1830 m. of passage and a trip to the 'end' of the cave takes about 4 - 8 hours!

There is a tourist section near the entrance and by this I mean access is relatively easy and there are some permanent ladders and quite good formation. Most of the cave lies beyond a sump in the river near the turnoff to the tourist cavern. This sump can be bypassed by climbing up flowstone and through a squeeze characterised by a strong breeze. On the other side of this squeeze is an 8m ladder climb to a large stream passage most easily traversed by wading in the water, however the more intrepid can attempt to stay dry. The stream passage narrows down to a flatter passage known as'the wet crawl' (which lives up to its name) and makes dryness history. This can be partially bypassed.

'The wet crawl' opens into a rockfall chamber where there is (or was) a visitors book to record the names of those keen enou h to get this far. Somewhere off this chamber lies the 'Gunbarrel Aven' - a large impressive rising shaft that has yet to be explored.

Up the rockpile at the far left and through the boulders gives access to 'Caesars Hall' a magnificent chamber of impressive dimensions. In the bottom of this lies a pool of water which quickly turns to mud on disturbance and has earnt the name 'Diarrhoea Pit'.

Two more of these plus a number of climbs (about 6m) brings the cavers to 'Frustration Lake' and the realisation that one must return via all the hardship previously mentioned before one can rest.

This cave contains some very beautiful formation and is a good technique cave which can be recommended to both the speleologist and the touristing caver.

There is no flowing water at the campsite but there is sufficient water usually to have a wash. Wood is not too scarce.

An inspiring view can be seen by climbing the ridge containing the cave and is a good finish to a weekend.

Also near Wyanbene Cave are two smaller caves, as well as Big Hole, Marble Arch and Cloitmore caves a few miles (kilometres) away.

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YARRANGOBILLY

P. Winglee.

One of the less frequently visited areas SUSS goes to Yarrangobilly. Located some 315 miles from Sydney in the Kosiusko National Park, it is mainly suited to Holiday time visits.

The Yarrangobilly outcrop is a narrow band of Silurian limestone running approximately North-South for a distance of some 13 Km and varying from 0.5 to 2.0 Km in width. Like Jenolan this limestone has a steep dip, but here it is to the West. Rising to the east of the limestone, the Yarrangobilly River crosses the limestone near its northern boundary and then turns southwards giving this area a 200+m gorge on the western side of the limestone outcrop. All the caves at Yarrangobilly bar a few small relics are located on the eastern side of the gorge and the main caves are located on the plateau or down the limestone cliffs.

Younger granites and porphry completely surround the limestone and give rise to many westward flowing streams that on striking the limestone result in large blind valleys and dolines that mark the beginning of each cave system. The water eventually resurges inthe Yarrangobilly River in a fairly complex hydrological pattern. Unless 'Look in the Creek' leads to fantastic amounts of new cave, Yarra gobilly is basically a series of lateral cave systems, with an abundance of water and sumps.

Yarrangobilly has an abundance of well decorated caves, among them are the tourist caves that have very dense and delicate formation of a high standard. Eagle's Nest is the main undeveloped cave being the deepest(174m) and sixth longest (3600m) cave on the Australian Mainland, only just shorter than Mammoth. This system has three parts East (Y2) and West (Y1) Eagle's Nest and the Eyrie (Y3). It contains huge caverns and rock-piles, and deep stream canyons with good formation. This system is an excellent example of stream piracy in which the creek has moved progressively eastwards. There is however, little possibility of extra substantial depth as the level of deepest rig is roughly that of its resurgence in Hollin Cave (Y46).

Lying on the vertices of a right angled triangle are the Deep Creeks, East, West and North - about 1Km north of Eagle's Nest. Each of these is fed by a separate creek and has an active stream with plenty of crisp mountain water. Of these East Deep Creek is the most substantial and since the upper (Y4) and lower (Y5) sections were connected by Alan Warild last year it is probably the third deepest cave on the Australian mainland. Y5 has a rockpile chamber giving way to an active streambed crawl and huge roof pendants with deep scallops on the walls. Further in, on a higher level there is more formation in the 'Donkey Tail Room'.

To the north, the next main system is Coppermine (Y12), which is the resurgence of Y8, Y9, Y10 and Y 45. Coppermine Cave is at river level and has a wide through stream passage and a well decorated but partially vandalised upper level.

All the main caves have been gated by David Lambert, the current Ranger Naturalist at Yarrangobilly.

The Yarrangobilly Research Group (YRG) was formed to co-ordinate and stimulate speleological research here and it comprises largely Canberra Cavers while UNSWSS is particularly active as well.

SUSS has had a long history of exploration here, starting in March 1950. During the early 50's attention was focused on the Eagles Nest System with many tough discoveries being made in the caves, particularly by P. MacGregor and Brian O'Brien and FredStewart. From the mid sixties tothe seventies visits continued, often being led by John Dunkley.

Current work by other clubs includes the continuing exploration of many of the major caves. There is also much work to be done in documenting and surveying the smaller caves. As well there is the usual hydrological geological and biological research being undertaken by YRG. A great deal of surface surveying is required and conservation projects are encouraged. In order ot maximise their return for allowing trips underground, the NP&WS is encouraging specific projects to add to their knowledge of the area.

Suss work at Yagby has been hampered by the great demands of current wrk at Jenolan, the distance and the lack of consistently interested people. like other non Jenolan areas, the onus is on everyone to encourage trips to the areas concerned. Numbers are not terribly significant as a joint trip can be organised.

References.

ELLIS R. Longest and Deepest Caves.
SF Newsletter 66(summer 74)

LINDECKER T. The caves of the East Deep Creek System at Yarrangobilly.
SUSS Journal 7(2):17-25, July 1968.

PAVEY A. Revised Caves list - Yarrangobilly. Spar 30 Dec 1973
The Eagles Nest Cave System. Spar 40 Dec 1974

BUNGONIA.

Tony Austin.

It is very difficult to know where to start when one attempts to give a brief summary of Bungonia as a caving area. This is because there is so much information on the area available, unlike many other areas where a quick synopsis often ends up being a definitive study. Perhaps my bias is already beginning to show? Anyway - the bare facts.....Bungonia lies about 25 miles south-east of Goulburn- the caves being a further seven miles north-east of the township. From Sydney they are best reached via Marulan(on the Hume Hwy) and hence to Bungonia.

The area has two main things to commend it to the caver/bushwalker, the first being a large number of interesting and varied caves(about 150 tagged at present) and a really spectacular gorge(about 890 feet deep). The caves are mainly vertically developed, though it is difficult to generalise as there is a cave system which has over 5000 feet of passage- most of it being in a straight line. Up until recently Bungonia also boasted the deepest cave on the Australian Mainland - Odyssey Cave at 485 feet deep. Unfortunately this honour now rests with the Eaglesnest system at Yarrongabilly. Thus Bungonia is an ideal beginners area as it offers such a wide variation in caves, from the really challenging to the very easiest. Currently it is an unrestricted area, no permit being required to camp or cave in the area. This has lead, unfortunately, to an exceptionally high usage of a large number of the caves resulting in considerable vandalism, both intentional and inadvertent. Though the area must have had some well decorated caves initially there a few signs left now.

For various reasons Bungonia has received a lot of serious speleological attention over the past few decades and this research is still continueing. The area is by no means 'trogged out' yet- there is still a lot to be learnt about the area and new caves are still being uncovered at an alarming rate. Unfortunately there is no one unifying body overseeing the work being down and thus it is difficult to keep abreast of all the latest discover

In the above paragraphs I have said very little really about the area, you really must come and see it for yourself so that you can understand what its all about.

See you on the Fresher's Trip.

WEE JASPER.

Tony Austin.

Wee Jasper is another very interesting area, though it is only rarely visited by S.U.S.S. these days. It lies about 34 miles to the south-west of Yass - making it quite a reasonable sort of trip from Sydney. It lies within some very beautiful country and there are other smaller limestone deposits within close proximity. The camping area is controlled by the local council and lies beside a small creek which flows into the nearby Goodradigbee River. The caves themselves are very interesting, being primarily horizontal in development. The three most popular are Punchbowl, Dip and Dogleg. Like Bungonia there are quite a few smaller caves that though now thought to be insignificant could certainly prove to be a part of much larger systems.

CLOSURE AND ADJUSTMENT OF CAVE SURVEYS.

R. King.

One standard technique used in cave surveying is the use of 'looping' stations on a traverse in order to correct for inaccuracies. Another method is to tie in lower grade surveys with a base traverse of higher grade, and this also requires adjustment.

For these purposes, it has been found that the algorithm which corrects all co-ordinates in direct proportion to the lenght of the previous leg in the survey (Rutherford and Amundson, 1974) is the most useful. This formula has been utilised successfully for map drafting in Australia (Povey 1974, King 1975), and it is arguable as to whether the accuracy of most cave surveys justifies more advanced methods of correction (such as the 'least squares' principle (Schmidt and Schelling, 1970)).

Quite simply, the mathematics are below:-

$$X_i = x_i + (\Delta x) D_i / T$$
$$Y_i = y_i + (\Delta y) D_i / T$$
$$Z_i = z_i + (\Delta z) D_i / T$$

where X_i, Y_i & Z_i, = closed x,y,z co-ordinate of the i^{th} station in the branch.

x_i, y_i, z_i, = uncorrected x, y, or z coordinate of the i^{th} station in the branch.

$\Delta x, \Delta y, \Delta z$, = total closure errors, (positive or negative) for the whole branch in x, y, or z, direction, measured relative TO the final unadjusted closure station position.

D_i = cumulative taped distance to the i^{th} station

T^1 = the total taped distance of the branch.

A simple two-dimensional model will illustrate these procedures.

imaginary unadjusted survey plot

survey leg	distance unit	bearing degrees	stn	unadj x co-ord	unadj y co-ord	adj x co-ord	adj y co-ord
0-1	3.61	56.3	0	0.0	0.0	0.0	0.0
1-2	5.83	149.0	1	2.0	3.0	1.88	3.12
2-0'	4.74	161.6	2	5.0	-2.0	4.67	-1.67
	ΣD= 14.18	ΣB=366.9	0'	0.5	-0.5	0.0	0.0

$\Delta x = -0.5$ $\Delta y = +0.5$

References

KING R. 1975 — SUSS Bull 15(6):110. Map of 'Kelly's Cave Cliefden'

Povey A. 1974 — 'The Eagles Nest Cave system, Yarrangobilly' Spar 40

RUTHERFORD J & AMUNDSEN — NSS Bull 36(2):7-17 1974 Use of a Computer program for Cave survey Reduction'.

SCHMIDT V. & SCHELLING J. — 'The Application of the Method of Least Squares to the closing of Multiple Connected Loops in Caves of Geological Surveys.' NSS Bull 24():40-47, 1970

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REPORT ON NSW LIAISON COUNCIL MEETINGS

R. King.

During 1975 and early 1976 Bruce Welch and myself had the pleasure (??) of representing SUSSat these meetings. Dapto was the venue for two and Mt Kiora for the third. The following is a summary of major decisions.

22AUG75

Conservation and Gating- The proposal to gate Tuglow Main Cave and Woofs Cavern, Colong was ratified. BMSC asked for reports of illegal caving at Tuglow and Colong for their survey of visitation to the areas. NUCC reported that Wyanbene required gating and produced a report on the matter.

A committee headed by I. Wood (UNSWSS) was formed to co-ordinate Cliefden conservation, to produce a submission and to organise a symposium on the area.

SUSS instigated motions calling for voluntary restricyions on access to Upper Oolite (Mammoth Cave), Chevalier and Alladin Cave at Jenolan, being replaces by infrequent ASF organised trips.

National Parks and Wildlife Service - The Council moved to approach NPWS re cave gating, changes in permit requirements and advice on cave management policies.

Finance - It was agreed that a $5 levy be charged to member clubs of NSWLC.

18OCT75

Caveconect 76 - CSS presented details of organisation for the ASF Conference and were advised of NSWLC policies regarding Conference Fieldtrip Guidebook.
NSW Cave Rescue Group - NSWLC accepted of NSWCRG to organise a rescue practice early in 1976.
Yarrangobilly - The attention of all socities was drawn to the fact that NPWS REQUIRE INDIVIDUAL trip reports promptly after each trip.
Convenor and Treasurer - Ian Bogg (BMSC) re-elected Convenor, Richard Wilson (MUSIG) accepted the position of treasurer.
Off Road Vehicles - Notice was given that a government inquiry into policies regarding off road vehicles had asked for submissions.

24Jan76

- held in conjunction with ASF Committee Meeting.

HCG - the Sydney and Canberra branches of HCG have rejoined and HCG was welcomed back as an active club.

Baptist Caving Association - their application for full ASF membership was endorsed.

Illegal Caving - SUSS made a complaint about an incident in which illegal caving occured in a permit area by an ASF Society. The delegates of the Society concerned assured the NSWLC that in future all efforts would be made to comply with the permit requirements.

CORRECTION

With particular reference to SUSS Bull 15(8):167-170

In measuring the flow rates of water the units should read Megalitres (Ml) per day not millilitres (ml) per day as sometimes (more often than not) written. Sorry Bruce!!

ARTICLES FOR THE SUSS BULLETIN.

To make it easier for the typists and possibly the editor the following requests are made of contributors to the Bulletin.

1) Articles for April issue to be in to Tony Austin by 4 . 3 . 76 (the next General Meeting). This will be the last issue of volume 15.

2) Similarly articles for the following issue (Being May) should be given to Tony Austin by 22.3.76.. It is hoped that the issue will contain all annual reports presented at the AGM (5.4.76).. So office bearers take note!

These are absolute final dates, so try and co-operate.

BUNGONIA CAVERS PLEASE NOTE: COLLEGE CAVE CLOSED.

Over the Christmas period there was a rock fall in College Cave when an observant trog noticed that an oft used handhold was not as secure as it initially seemed. To correct this he removed the offending rock which resulted in a significant movement of rock just below the entrance rift. The cave is now considered to be in an unsafe condition and it is requested that all trogs refrain from entering until the matter has been investigated further. The relevant people have been notified and a sign has been posted at the entrance. The matter is quite serious - I have been in the cave subsequent to the fall and there is a very dangerous area which must be negotiated in passing through to the top of the 30 feet drop.

THE DISCOVERY OF THE 'BOOMALAKKA WEE' PASSAGE, WIBURDS LAKE CAVE JENOLAN.

20th December 1975

R. King.

Whileindulging in a geomorphological trip into Wiburds recently, Bruce Welch, Henry Shannon and I slithered into a hitherto unknown area located to the east of the main Dyke Passage, between Dyke and the start of NW Passage. The discovery was a direct result of searching for a possible source of the large stream noticed here previously (SUSS Bull 15(8):173.).

A Corrosion scar outside a small hole off the main passage was enough to inspire further investigation and with Henry extolling the virtues of 'faithfully following the hydrology', and a bare minimum of digging we squeezed onwards into the realms of the unknown - and on.. and on.....

The first 30m consists of a reasonably tight and awkward pressure tube, with obvious signs of water recently having flowed up a 3m climb and on (into main passage presumedly). From here, Bruce ('The Weasel') successfully negotiated a nasty squeeze into another 30m of large walk through type passage before returning. There are two uninvestigated leads in rifts near a rockpile at the end of this, which are believed to connect to the rockpile and river ppassage to the NW of Lake Chamber. One suspects that the origin of floodwater is the alluvial flats.

Subsequently the new passage was named the 'Boomalacka Wee' (Down Under Jan 1976) - a lift from the 'Green Ginger Man' which Rosie Murphy was reading. Good potential exists for future discovery via these new leads, and SUSS reserves the right to further exploration of this region in 1976.

Many thanks to UQSS for lending us their invaluable editor (Rosie) and their resident cave magnet and guru for the weekend.

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OBSERVATIONS ON THE SOUTHERN LIMESTONE, JENOLAN.

21st November 1975

R. King.

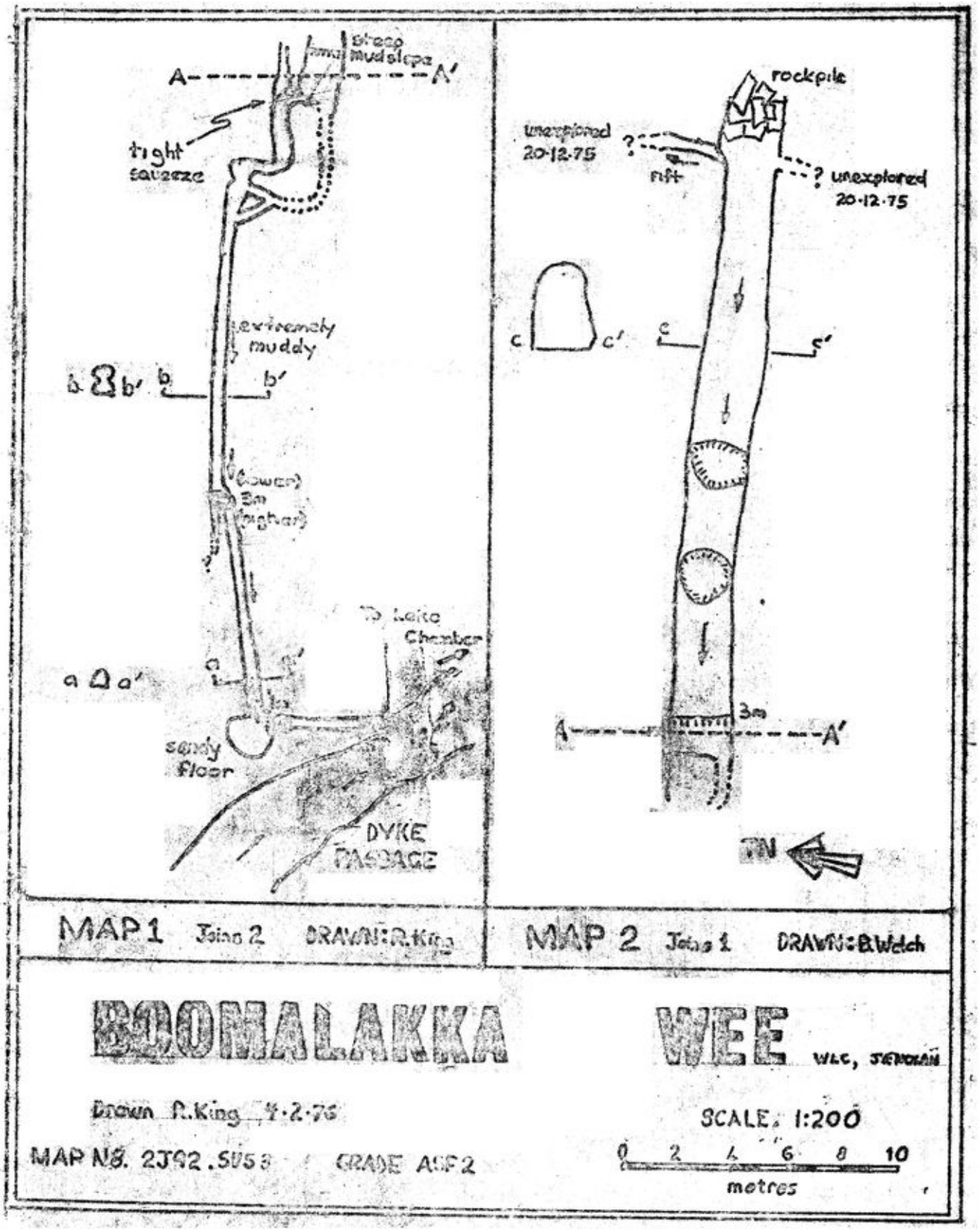
Precis

(1) Hydrological measurements taken at Blue Lake
(2) Problems with the 'velocity head' method of calculating flow rates
(3) Effects of Camp Creek tributaries on Southern Limestone drainage questioned.
(4) Dry sinkhole noted north of Bottomless Pit Flat with excellent digging prospects.
(5) Stream sinking on southern edge of J46 Flat.

Report

Whilst Handel, Kirby, Campbell and Co. played with their new toys Gibbs Ascenders - this hardy trog ventured up the Southern Limestone at 3pm.

First some measurements were taken on the water flowing into Blue Lake,


steep mudslope
A
A'
tight squeeze
extremely muddy
b
b'
(lower) 3m (higher)
To Lake Chamber
a
a'
sandy floor
DYKE PASSAGE
rockpile
unexplored 20-12-75
?
rift
? unexplored 20-12-75
c
c'
3m
TN
MAP 1 Joins 2 DRAWN: R. King
MAP 2 Joins 1 DRAWN: B. Welch
BOOMALAKKA
WEE
W.E.C. JENOLAN
Drawn R. King 4-2-76
SCALE: 1:200
0 2 4 6 8 10
metres
MAP No. 2J92.SW53
GRADE ASF2

the purpose being to correlate these with other hydrological phenonena that weekend. The readings were taken using the 'velocity head method' (Shannon 1972) unless otherwise indicated.

	cusecs
J162 Imperial Water efflux through weir	3.7
Small leak next to weir	0.1-0.2+
leak to south of J162 under rock	0.2+
Grand Arch stream	0.3
J163 Styx River efflux	1-2 +?
over main eastern weir	6-7+?

+ - guessed by King.

Unfortunately it is virtually impossible to get a figure on the Styx Efflux, but by difference it was in the order of 1 -2 cusecs. Metrication of flow is still very confusing, so this author, for one, will continue to use the time honoured cusec.

The velocity head method entails placing a ruler into the stream, and measuring the height to which the water 'backs up' (H). This figure may then be directly converted to a surface flow velocity (v) by the formula

$$v = \sqrt{2gH} \qquad \ldots\ldots\ldots(1)$$

Shannon's 'rule of thumb' calculations approximate this figure and are simple to use in the field. Cross sectional area of flow is then measured and a flow rate computed:

$$\underset{\text{(cusecs)}}{\text{flow rate}} = \underset{\text{(ft/sec)}}{\text{mean velocity}} \times \underset{\text{(sq ft)}}{\text{sectional area}} \ldots(2)$$

The major problem with this method is that at low velocities the surface tension of the water on the ruler negates any accuracy in the rise in the head, and answers should be warily considered. Although Shannon quotes a flow figure of approx. 1 ft/sec as a minimum, within my experience this is somewhat small.

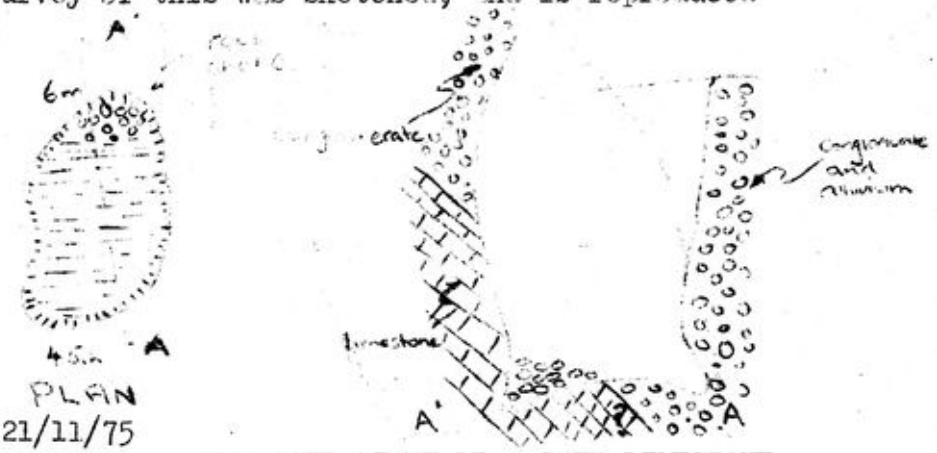
The object of this short reconnaissance of the Southern Limestone was to try and gather some further information on the hydrology (whilst bravely battling the nettles!!).

At (A) (see map) the tributary creek was water saturated from about 100m up the valley, although no actual water flow was apparent. Most of the tributaries of Camp Creek probably play an important role in infiltrating water to the underground system, especially during heavy rain, but this is yet to be investigated.

Bottomless Pit Flat (B) of an area similar to Serpentine Flat in the northern Limestone, must retain a fair amount of water after flooding. In This case the edges appeared to be relatively dry, and no water was observed flowing.

One particularly interesting item found was a dry sinkhole about 5m deep

and 3m in diameter located at (C) on creek level. Situated right on the border of the limestone boundry, it has a rock choked floor which could well lead into an underground river section with only a little effort expended in digging. A quick grade 2 survey of this was sketched, and is reproduced below;



Surveyed and Drawn R. King 21/11/75

Gdo ASF 23 1:100

UNTAGGED SINKHOLE : STHN LIMESTONE

A number of rockpiles, like the one south of Mammoth Flat are evident in this region, and a major one is located at (D). Some water probably filters through these in wet weather.

On the southern end of J46 Flat (E), a stream sank into alluvium over a space of about 30m. This is presumed to be the main dry weather submergence of Camp Creek, which next appears as the Styx River in River Cave. Flow was 0.3 cusecs.

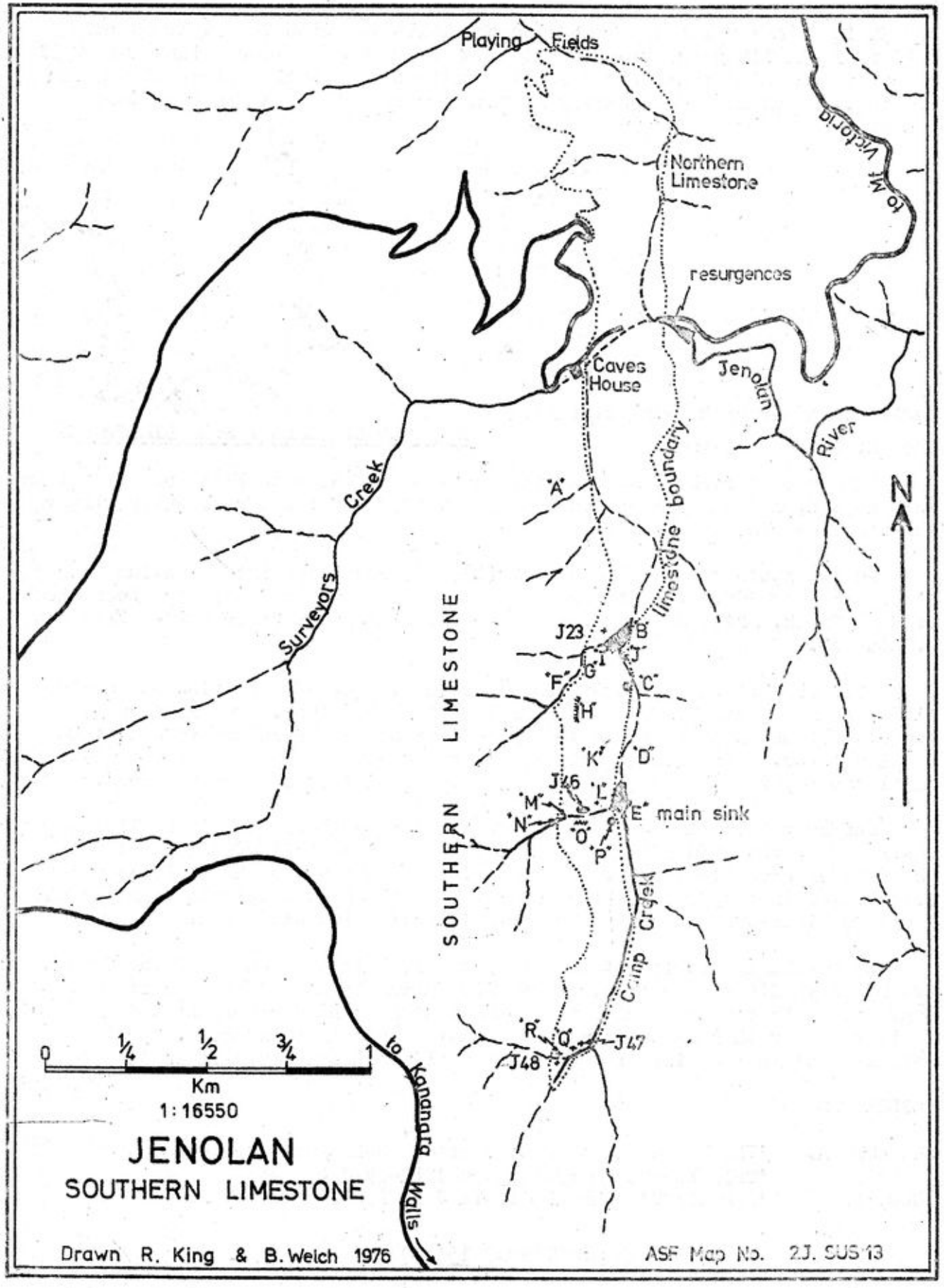
The scenario of the Southern Limestone is one of a continuous massive limestone band, rising sharply in cliffs from the river. Demarkation of the limestone boundaries is indicated by a distinct change in the type of vegetation cover. At a rough estimate, there remain as many as 100 to 150 small caves yet to be tagged, and chances for exploration are numerous.

Unfortunately time ran out before the far southern end of the limestone was reached even though it had been hoped to get some figures for water in the Paradox Cave (J48) area. Shannon did some early work here (1963) which illustrates that hydrologically this area is the most intriguing part of the Southern Limestone and certainly worth intensive investigation.

In conclusion it is apt to say that very little is known of the Camp Creek / Styx River hydrology, especially during optimum flood conditions. Many parallels can be drawn between the Southern and Northern Limestones, and it is food for thought that another Mammoth Cave might lie here. A dig carried out in the sinkhole mentioned would be very promising in this regard.

REFERENCES

SHANNON, H. 'The Measurement of Streamflow' SUSS Bull Apr 1972 p84
'Trip Report No 198' (unpub) 17-19 Jan, 1963
AULD, P. ' TR NO197' (unpub) 11-12 Jan, 1963.


Playing Fields
Northern Limestone
to Mt Victoria
resurgences
Caves House
Jenolan
River
Surveyors Creek
limestone boundary
N
A
B
C
D
E main sink
F
G
H
I
J
K
L
M
N
O
P
Q
R
J23
J46
J47
J48
SOUTHERN LIMESTONE
Camp Creek
to Kanangra Walls
0 1/4 1/2 3/4 1
Km
1:16550
JENOLAN
SOUTHERN LIMESTONE
Drawn R. King & B. Welch 1976
ASF Map No. 2J. SUS 13

FURTHER OBSERVATIONS ON THE SOUTHERN LIMESTONE.

3JAN76

B. R. Welch.

Present: B. Welch, H. Shannon, R. King, P. Campbell, M. Hend l, P. Wingloe, P. Kirby, G. Cox, G. Weiss.

Having no permit for the weekend, we spent Saturday walking the Southern Limestone, and thus this report supplements observations made by R. King.(1).

In passing we had a look at the entrance to a cave located on the bend in Camp Creek at the base of the steep hillside. Its location approximately corresponds with that of J45 as indicated on the SSS map and it may in fact be J45, but it does not appear to be tagged.

It may be an important cave in that it is located in the region above the end of Barralong Cave, although the creek bed here is some 90m above the level of the Blue Lake, and would be at least 45m above Barralong Cave.

Further up the Camp Creek Valley is the grassy flat referred to be King(1) as Bottomless Pit flat. As King pointed out, this flat resembles Serpentine Flat, although the dry bed of Camp Creek is somewhat smaller than that of the dry bed of McKeowns Creek in the Northern Limestone. The crossection of McKeowns Creek is in the order of 9 sq. m, while the crossectional area of Camp Creek is about 3 sq m.

Camp Creek continues up the eastern side of the outcrop, while another creek -- which I shall refer to as Bottomless Pit Creek, follows the western side of the outcrop (see map). This stream sinks at poin E and the channel of the dry creek as it crosses Bottomless Pit Flat is a good example of a fl flood cut channel. Under normal flood flow, the surface vegetation is sufficient to prevent the gravel from erosuon, however once stripping of this surface vegetation occurred, then flood waters quickly cut downwards. The resulting 'canyon' in the gravel 0.5m wide and up to 1m deep illustrates this process graphically.

Bottomless Pit Creek sinks shortly after running off the exposed slstey bedrock and the contact with the limestone id clearly exposed. Some distance down the creek at point G a small gravel sink is located at the base pf the hillside and it appears to take a small amount of water during periods od high flow.

Some interesting cliffs of orange stained limestone are located at H and incorporates a long shallow overhang, obviously used extensively by wallabies, and perhaps also by goats. Folding of the limestone is evident in these cliffs. The top of the hill is surprisingly flat, and the limestone is exposed in ridges which follow the line of the strike.

A cave has been reported at I by B. Welch (pers. comm.). Apparently this cave is low down at the level of the flat, and contained some digging implements in it, at least in the early 1940's it did. I was unaware of the location of this cave until after the weekend.

Returning to the Camp Creek Valley, the cave visited on a previous SUSS trip (2) reported to us by guides Colleghan and Oliver, is located at J. A short distance up the creek is C is located one of the most unusual karst features I have ever seen. This feature has been reported by King (1), when he also referred to it as feature C. It is located right next to the creek and is formed in red earth androck 'breccia' which is sufficiently compacted to allow vertical walls in excess of 5m. This feature has been known to Shannon for some years and he ahs proposed the name 'The Hoffalup Trap'.

Whilst traversing the hillside, Malcolm noticed a small hole under a tree (seeK). The location is a promising one as it is situated on the top of a large cleft / valley in the hillside.

During our search for J46, Bruce noticed a small hole in the grass slope at L which may have some prospects. J46 is an intersting feature. Located almost at the level of the alluvial flat, it has the appearance of being an abandoned sink. Shannon visited this cave in the 1960's and informs us that there did not appear to be any immediate prospects.

Looking across from J46 a good example of 'kink fold' can be seen in the bedding of the limestone on the opposite side of the tributary creek. A similar feature appears on a larger scale in non-limestone rocks high up the valley side downstream of the Blue Lake on the south side of the valley.

Further up the tributary creek beyond J46 the stream sank into gravel at M. This was somewhat unusual in that no water was sinking near the contact zone, which is clearly visible in the creek bed at n. Instead it flowed across limestone for some distance before sinking atM.

On walking back to Camp Creek the party came across a cone shaped collapse doline formed in gravels, which although seeminly as deep as the Hoffalump Trap, is not as spectactular. This feature was unknown to Henry sShannon and it appears not to have been recorded previously.

It is ineteresting to note that Camp Creek was sinking in the gravel only some 20m from this point at E. It is possible tehat these two features are related - ie in the form of a cave.

For the next 800,m, there appeared to be very little of interest until j47 was reached. Here a spring emerges from the base of the bluff and flows down to Camp Creek. However it appears that much water seeps through the talus slope joining the creek further upstream. From our observations we concluded that J47 cave is a true headwaters of Camp Creek! A number of small holes were noticed upstream of J47 at Q, and these may provide an easier route into J47.

Paradox Cave (J48) is so named because of its most unusual qualities:-
1. It contains a stream which flows outwards, but apparently sinks just inside th e entrance.
2. It is an 'efflux' cave at the end of the limestone.
3. The only true efflux on the other side of the creek(J47).
4. It apparently contains bats - quite unusual for Jenolan.

Henry and Randall noticed a couple of holes at R in the hillside on the opposite side of the creek from J48, which require investigation. (3)

All in all, a most interesting area. No caving was done and we camped on the Boyd River.

References:

(1) KING, R. 'Observations on the Southern Limestone, Jenolan' ibid.
(2) WELCH, B. R. 'Trip Report Jenolan 29NOV75-2DEC75.' SUSS Bull 15(8):176
(3) SHANNON H. 'Supplimentary Trip Report Jenolan 3-6JAN76' ibid.

SUSSsussSUSS

SOME HYDROLOGICAL AND GEOMORPHOLOGICAL COMMENTS ON THE FAR NORTHERN LIMESTONE @ JENOLAN.

C. H. Shannon.

(the following article is extracted from a letter to John Dunkley(1972), commenting on the draft paper entitled 'Limestone Outcrops north of Wiburds Lake Cave, Jenolan. APreliminary Report.' which was subsequently published in the SUSS Bull 12(7):57-62. It is published here in the hope that some of Henry's ideas may promote further comment and study in the area.)

I prefer the term limestone outcrops rather than limestone deposits for what I think you mapped - did you really determine limits of the surface area underlain by limestone or just the surface limit of limestone outcrop?

This 'large doline on the ridge at ... is new to me isn't? On our trip we saw the group of three and one other in a gully not far from the locked gate. Has anyone followed the actual creek of Mc Keowns up to the locked gate area? I would be thinking the party would be mainly interested in following the suspected position of the limstone belt, agreed that it is mainly west of the creek but there is a chance of another major stream sink in the bed of McKeowns, where I interpret from the photos a small cross fault (like the one at Serpentine corner) bringing the 'limestone' into the creek bed. Granted th ere is water in Mc Keowns at the junction with 'Three silks Creek'; but this is downstream of the junction with Terrace Creek, all the water could come from Terrace Creek.

I don't think the Porphry interferes with the limestone belt. The sill cuts out before the locked gate anyway. Air photos tend to indicate a continuous, gently curved trend of the presumed limestone belt.

The very presince of karst hydrology in the limestone belt proves that it must be continuous. The lenticularity of the surface outcrop is a function mainly of the superficial cover. I agree that much of the limestone downstream may have been covered in the past, The superficial deposits contain red earths derived from solution of limestone, but most of the cover is transported soil sloughed off the surrounding range. It is uniformly stony, with angular stones in it but a very porous structure in the soil material itself.

This stuff is variously mixed with the limestone residual soil, which when pure lacks allochthonous stones (mostly of chert) and is plainly red coloured. The sloped talus may have buried the karst topography on the limestone.

The limestone may at some points have been altogether removed by stylotic solution. If you imagine an egg carton put together the wrong way, so point touches point. There should be a veneer of limestone insolubles between the chert and the slate if this happens, and these should weather red. But where I have most suspected these 'squashed out' areas stylolitically removed limestone the gunk that occurs where the limestone should be is yellow clay.

I suspect this is a very old soil filling a gutter excavated in the residual clay left behind by stylolitic removal of the limestone unit -- but even where this has happened there is no break at depth of the limestone bed.

The stony sloughed talus soil is itself capable of storing a lot of water. If this material is very thick it may be the major storage for the base flow in Lower River. You will have noticed that the gullies lack in channel when they cross the limestone belt. This would indicate that they do not run even in normal flood conditions, but they are as large as many gullies which do have channels, further south in the valley. It follows that flood discharge is stored underground here and released gradually.

There may be a choke or a deep siphon retarding flow between the 3 sinks nd the main submergence. A very deep U-tube here could account for..... (text unintelligible. Ed) thermal effect. If this does occur here it makes an effective upstream end of the Wooly Rhinoceros -- but there could still be unentered cave upstream of the t ro sinks.

Retardation of flow could be a function of free draining of the porous storage medium. I just like the idea of a choked outlet.

I do not agree that this new northern area has much to do with Wiburd lake Cave, or even the cave in the l st bluff. I think that these two are explicable as persistent submergence caves -- grand scale equivalents of the Serpentine taking water out of Mc Koums into the Wooly Rhinoceros. So far I don't think any of Wiburds represents a high level of the main Jenolan Underground River. I think this is still further to the west. To express it slightly differently, I think that the water that has flowed in Wiburds, as we know it, is derived entirely from the underground drainage of the northern belt. The new northern extension of the belt has cave of its own! I think the fundamental break is the end of the flats

As for age of the northern extensions 'Karst', I accept that present surface karst is rather young, post -- dating the massive sloughing of soil mantle. I believe that mature karst and inter rated underground drainage is a lot older.

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THE FAR NORTHERN LIMESTONE, JENOLAN
-T.R. 4JAN76 and Comments

B. R. Welch

This trip report outlines the activities on Sunday 4JAN76, but does not detail all our observations, as these are amply covered in a paper by John Dunkley in a SUSS Bulletin 4 years ago(see references). Rather, this article comments on the differences between our observations and those of Dunkley et al.. His paper remains the main reference work for this area.

We drove to the headwaters of McKeowns Creek and then continued down to the locked gate, looking at the limestone outcrop near the dam. After parking at the locked gate, we set off on foot down the valley. On the way Shannon pointed out the 'purple shale' outcropping in the road cutting just past the locked gate, and about halfway to the 'Non Sinking Creek'.

Thiscreek is the only one noth of Dillons Creek and on the western side of the valley which reaches McKeowns Creek.

Dunkley 1972 shows some 'very small outcrops' (Map II of his paper) at approx AMG 778589. We did not see these, however a short distance up the dry valley from this point we did notice two small dry dolines which Dunkley has not recorded. It is interesting that Carne and Jones 1919 show an 'approximate' limestone outcrop some distance further up this creek. As far as I know no one has looked for this outcrop yet.

We continued down the valley till we reached the 'Three Sinks Area'. The limestone outcrop just over the spur in the creek to the north of the 3 sinks is a steep limestone outcrop with a stream (about 5 millicumecs) sinking at the base of if. Dunkley describes it as '..a shallow 'soak' and a small outcrop of very rotten limestone.', however I think it warrants further investigation - it is the best prospect of gaining entry , to the fabled Wooly Rhinoceros north of Wiburds.

After examining the dry valley downstream we concluded that the stream very rarely, if ever, flows past this 'soak'. Of course several tons of gravel would have to be removed to gain entry, to say nothing of the chest high nettles###

We discovered that there were not 3 but 4 dolines beside 'Three Sinks Creek.' Shannon has suggested that the large size of these dolines is due to the fact that the creek has bypassed them. In doing so , the input of gravel has ceased, and the normal process of solution/creep of fill into the cave system below may continue uninhibited.

The doline observed by Dunkley next to the fire trail on the ridge to the south was not investigated. We adjourned instead to a beaut swimming hole at the top of the falls a short distance down McKeowns Creek to cool off and have lunch. After walking back to the cars, we motored to the Hydro Station at Jenolan for another swim.

References:

CARNE andJONES	1919	Limestone Deposits in NSW. Min.Res. Bull.25:347
DUNKLEY J.R.	1972	Limestone Outcrops Notth of Wiburds Lake Cave Jenolan A Preliminary Report. SUSS Bull 12(7):57-62.
SHANNON H.	1972	Trip Report, Jenolan 19-22AUG72. SUSS Bull 12(6):50-51

JENOLAN.

H. Shannon

"Present: U.Q.S.S. Party ex Brisbane.
Henry Shannon, Holden.
Owen Dixon
Rosie Murphey, Datsun.

S.U.S.S. Party ex Sydney.
Bruce Welch, Leader
Randall King
Peter Wingloe
Malcolm Handel
Dave Creed
Geoff Innes
"Revered old fossils are expected to perform..." .

The trip from Kempsey was rainy and/or foggy all the way and Jenolan was very cold. The troops mustered on Mammoth Flat through Saturday morning, discussed old times, the present temperature of SSS/SUSS relations, and did not get away caving until quite late. We went to Spider Cave, which is a new SUSS discovery, in the vicinity of Frenchman's Cave, ie. downstream of the Playing Fields, where the Koala Koncentration Kamp is located. I gather that all the transported koala have died now, not surprising considering the microclimate of the Playing Fields.

Anyway, the interest of Spider Cave is that it gets below the level of McKeowns Creek, (=Jenolan River) and in its lower part has a creek bed which functions when McKeowns is running. Apart from that it is also both Dretty and sporting, and has a lot of well preserved solutional features in walls and ceiling, and a great deal of superficial bone material. The downstream end was at this stage a diggable rising squeeze with a floor of loose gravel and with a distinct draught. I considered it the best prospect yet seen for getting into the undiscovered section of the Jenolan Underground River, between the lower River in Mammoth Cave and the end of the divers' extension of the Imperial River Cave,(Hairy Diprotodon Cave.).

On leaving Spider Cave, conversation veered to the Wooly Rhinoceros Cave, which is the missing River Cave upstream from lower river. Wiburds Lake Cave is the most obvious lead, but there are others, which the Sydney party pointed out as we went up the valley, such as (a) a cave MSS has been digging in, not far from Hennings Cave upstream. This cave has 'corrosion Pot-holes', with guano. (b) two caves in the vicinity of the large rocky doline on Bushrangers Flat. (this refers to the flat outside Wiburd's Lake Cave.Ed.)The lower cave has a draught, and fresh scalloping. I did not see the upper one.

We went up to them in stream sink of McKeowns Creek, where there is a small cave with water in it and two entrances. The water was down some 1.2m from the level on my previous visit. The surface film made flow movements hard to detect, but concensus was that water movement was ocurring. This cave warrants a name and I have some suggestions - (a) Main Sink Cave;

(b) Watersend Cave;
(c) Dogwood Hole, to put up for the folk process selection. My own preference is for Watersend Cave, then Dogwood Hole,(this is a flowering shrub, which grows near the entrance, it is rare at Jenolan.).

Then back to Wilburds Lake Cave: first down to Lake Chamber, then to the UQSS (Henry's Dig) which was flooded, and the Yawning Gulch nearby, then back to the Lake Chamber.

Now, Bruce had been intrigued by an unexpected flow pattern he had seen where the stream in Lake Chamber was splitting in a common fashion (0.2cusecs turning out of the Lake Chamber while 0.2cusecs went into my dig.) a large flow, (c.2.0? cusecs) was coming out from under the dyke. Usually there is barely a trickle from under the dyke, when the Lake Chamber stream is running thus Bruce was thinking in terms of a flow coming up and over and out of the Jenolan Underground River. My own feeling is that there are other possibilities, however, while looking for an inlet passage that could account for the flow, I spotted one. It required digging at first, but opened out into a kind of straightened Mammoth Squeeze. At about 20m in here is a 2.5m shaft, and 10m on the passages splits, with the obvious way on being an up and over squeeze. I have an aversion to being stuck head downwards, and left it for Bruce, who found it passable. The cave opens up, perhaps another 10m on and becomes walkthrough size for about 20m, where there is a rockpile with reasonable prospects. We decided on Boomalakka Wee passage for the name, which comes from 'The Tale of the Land of Green Ginger' by Noel Langley.

On Sunday, the dig in Spider Cave was worked on for hours, mainly by Bruce while the Brisbane Party warmed themselves over their carbide lamps and gloated. Before the bout of slackness set in Malcolm Handel investigated leads under a flowstone floor, assisted by Rosie. The prospects would be worth following if the present dig strikes difficulties. Lunch was an elaborate affair, lasting for more than an hour. The diggers persisted until Bruce could get to a small cavern, but this followed by another U-tube squeeze, with enough water in it to dampen his inclination to go on.

The Brisbane party spent the night at Mammoth Flat, and were joined by Bruce on Monday morning, before calling at the guides office to record the trip. Rosie and Owen went tourist caving, while I left for Broadalbane."

This trip report also appeared in Down Under 15(1):21.

JENOLAN TRIP REPORT 20 - 21 DEC 75

M Handel

-Exploration and digging in Spider Cave
-Hydrology and geology of McKeowns valley as far as North Wiburds Bluff
-New discoveries in Wiburds Lake Cave.
Present: B, Welch, R king, P Wingloe, M Handel(M's), D Creed, G Innes (P's), H Shannon (SUSS/UQSS), R. Murphy(UQSS).

With Henry Shannon coming back to his old stamping ground, we younger

members of SUSS decided to take advantage of his experience and learn as much as we could. The result was an extremely successful Jenolan trip, w ich included some significant discoveries in Kiburds Lake Cave and in the Spider Cave Dig. I am sure much of the information in this trip report has been published before, i include it here in the hope of stimulating and rejuvenating thought on the geomorphology and hydrology at Jenolan.

Spider cave

The first thing on Saturday morning was to show Henry, Spider Cave, and so the whole party went along. It was agreed that a dig in this cave, being carried out by Bruce and I has a very good chance of attaining the Jenolan underground River, however vertical drop of over 20m will have to be found since the level of permanent saturation is well below creek level. On the final chamber the flowstone and flase floors overlie a cemented fossil gravel bed. The embrication indicated that the pebbles were deposited by the stream flowing outwards from the final chamber. The flowstone probably now covers the source of this stream.

EMBRICATION

The diagram shows a cross-section of a gravel bed. One can imagine how the flow indicated will cause the tilt on the pebbles.

A Tour of the Valley

We left Spider Cave after a discussion of exploration in New Guinea. After lunch the party set off up McKeowns Creek, which was dry, with intentions of discussing all the hydrological and geological features as we came to them. Henry was certainly at home as he produced answers to the many questions poked at him. Dillons Creek was sinking at the head of the alluvial fan as usual. Bow Cave is the first obvious stream sink past the Mammoth Flat, and at times some water sunk at the head ofthe gorge. The next major sinking occurs outside Serpentine Cave. There are a couple of hollows in the creek that seem to take a good deal of water, however much of the flow is simply lost in the stretch of creek extending 50m upstream from the lower Serpentine Entrance (J72). This entrance is located in rocks and earth at the edge of the alluvial flat and has moved about 10minto the cave over the last 10 years due to collapsing at the upstream end.

Lower Entrance to Serpentine Cave (J72).

before now

In flood the J72 entrance can receive up to 1cusec of flow, however at times the creek has been flowing only 20m away and no water has come in the entrance.

Marching further upstream brings our b nd to where Hennings Creek comes in from the right (east). This creek is permanently flowing and at the time its small flow was sinking a few metres up from its junction. Often this creek forms a pool in McKeowns Creek where it sinks. Henry suggests this is a source of Central River in Mammoth.

The large doline at the base of the J98 Bluff was the next thing to be inspected. Two small caves found previously by Bruce and Randall are located just above this doline and may prove to be a bypass into what lies below the doline.

At Wiburds Bluff, J56 was looked at . This is a collapsed entrance at the base of the bluff. A grassy watercourse leads up to the entra ce which has been known to take 0.2 cusecs when the creek is flowing strongly. It is almost certain that this water enters Wiburds Lake Cave, and this is possibly the entrance used by Wiburd himself. The J56 entrance is somewhat analogous to the J72 entrance to Serpentine.

Henry pointed out two places in the creek where water sinks. Both are upstream of Wiburds Lake Cave and J56 and both occur at places where the stream comes close to the bluff.

The tributary just north of the ruined hut had a small flow in it.This stream comes from the eastern side, appears to flow permanently, and sinks as soon as it hits McKeowns Creek. When we saw it, it was actually sinking 10m before the main creek. Just north of here the m in creek flows along along the limestone/slate contact and gouging of the gravels has revealed a hole which befomes a very tight squeeze after a couple of body lengths. This may be a small cave which follows down the contact zone. The party continued upstream to a clay bluff being undercut by the creek on the western side of the valley. This bluff is 20m high and could represent either periglacial . or the fossil of an alluvial fan. It is indeed difficult to explain. The limestone boulders at the base of this clay bluff are very rich in coral fossils.

The furthest point reached was the main upstream sink located just outside J244. McKeowhs Creek was sinking here and had a flow of avout 0.3cusec about 10m up from where the creek becomes dry and a flow of a cusec about 50m further upstream. A pool in J244 appears to be flowing very slowly. A quick inspection pf the adjacent J245 showed the two caves connect and that the water seems to flow from J245 to J244. The pool of water oxyends between the two caves through a narrow vertical slot whcih was about half full of water at the time. Previous water levels noted in J245 may have submerged this slot. The very slow flow in the J244 sump is probably controlled by the seepage of water through gravel. Due to both the origin and appearance of the w water in J244/J245 a suggested name for the cave is 'Sinkwater Grotto'.

Wiburds Lake Cave.

On our way back down the valley we were compelled to go into W.L.C.. The Lake Chamber was dry so we looked at the (?Ed) dykes and headed off down 22 Passage. This passage follows a vertically displaced fault which is quite evident by comparing the different lines in the bedding on either side of the passage. It is not known which side has moved up or down. Just beyond where the passage forks, in the right hand branch, the water level was reached. This prevented access the 'Henry's Dig'. We turned back and examined the passage between the dyke and the beginning of the Western Passage. ON the return journey, Henry and Randall noticed a small tube meetint the main passage from the north. Together with Bruce they explored this which was estimated to be in the order of 100m in length. It is mostly very constricting and opens out at the end to a rockpile which has not been pushed. This is a very significant find as it appears to be a point where water enters the cave. We returned to camp in the dark.

Spider Cave Once More.

On Sunday morning after rising late, it was decided to spend some time extending the dig in Spider Cave, while Randall and Geoff surveyed J88. Bruce took the firststint at digging, while I was busy enlarging a hole I noticed under the false floor of the main chamber. The hole brought me right under the false floor into a hollow tube where the underlying conglomerate had been removed. A very awkward tube leading off to the west was much too small to enter, however it does seem to be evedence of past stream activity. I took over the digging and removed my quota of gravel and Bruce went back in after me and after more gravel was moved he squeezes around a corner emerging in a chamber 8m x 3m x 10m. The dry stream course goes along the length of the chamber and ends in a water filled sump. There is an airspace above the water, but it is not enough for easy access through the small hole. This, of course, is an exciting development in our quest for thr Hairy Diprotodon.

All The Sydneysiders left late in the afternoon, while the Queenslanders stayed the night and left the next day.

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SUPPLEMENTARY TRIP REPORT JENOLAN 3-6JAN 76

H. Shannon.

SUSS Party; R King, B Welch, P Winglee, H Shannon and others.
H Shannon for 5-6JAN only

The trip became a surface exploration one because of that hazard of the permit system - a sudden refusal of a caving permit. Attempts to shift the trip to Bungonia broke down, so we all arrived in effect as tourists; and while permission was obtained to camp at Mammoth Flat it was considered politic to go to Boyd River.

Saturday was spent on the Southern Limestone, most people going up from Caves House, but Randall and myself dropped down from Kanangra Falls road. The valley party spotted a new cave entrance in tree roots and an abandoned

kid (collected on the way out). The party mustered at the entrance to Paradox Cave (J48). New entrance digs were found opposite Paradox Cave, one at creek level in shaley limestone; the other 8m above in a cleft, both with draughts going out. Near the 'anomalous' spring (J47), three new entrances/digs were found. all without draughts and within 10m of the spring itself. Water coming in the Paradox Creek itself was debated and was considered to be an anabranch coming from the channel to the 'anomalous' spring, through rockpile. One more entrance was found in the cliff above and a little downstream of Paradox Cave. Old Flowstone and gravel are exposed in the cliff at the entrance.

I tried to follow the trend of the limestone on south of the Paradox Bluff. The limestone cuts out within 100m, but the stratigraphic horizon of the limestone can be followed onto the plateau by a 'contact' between the so-called radiolarian chert and porphry.

At Boyd River, the kid (baby goat) was fed through improvised udders.

Next morning, after a quick look at Kanangra Walls we went up to the "Northern LNorthern Limestone". No new limestone outcrops were found: so the number stands at three. There are two dolines on the northernmost outcrop (already known), one north of the middle outcrop(across the road, and very obvious). Two new dolines were found about 200m south of this outcrop.

Another new one was found between the dolines of 3 Sinks Creek and the tiny outcrop to the nort , where there is a digging prospect and a stream sink in a doline like nettle patch.

With regard to Jenolan hydrology, it is clear that nearly all the water from the west side of McKeowns valley goes into the limestone in normal conditions. The big exception being the running creek south of the locked gate (O.E passes).

There could still ne more limestone or dolines to be found. The belt could extend further to the North, and we tend to walk the road not the strike.

I stayed at Noel Rawlinsons place, and on Monday did tourist trips of Skeleton and Lucas caves. Flouroscene was placed at the grill where Camp Creek has been sinking. The quantity used was small and had not appeared in Skeleton Cave or anywhere else by Monday night, and I doubt if it survived th e gauntley of gravel, clay and org nic rubbish it had to get through. In Skeleton Cave the initials of Wiburd and Edwards '03 were seen near the Pool of Cerebus, which Noel and I checked that night. In the Grand Arch the floodways near the grill are fairly extensive, but the lowest and wettest is obviously blocked.

PS. For the doubters, it rained both on Mond y and on Tuesday as I was leaving. That makes 44 consecutive wet Jenolan trips.

PHUSRE KHOLA (Harpan River) CAVE, POKHARA VALLEY, KINGDOM OF NEPAL
15DEC75. J Dunkley.

Present: J. Dunkley, (SUSS), A. Povey (UNSWSS).

We arrived on the morning flight from Katmandu to Pokhara, noting en route the deep gorges ad possible caves in Pokhara Valley mentioned by Tony Waltham in his report of the '69 British Himalayan Karst Research Expedition. At the airport we hired bicycles (7 rupees - 40cents)(twice Katmandu price) and went off to inspect the Harpan River Cave. More correctly it should be Phusre Khola Cave, taking the local name of the stream.

The cave has been formed by the Phusre Khola breaching a thick bed of conglomerate overlying Pleistocene limestone below Pokhara Valley. The flow rate over the 40m waterfall entrance was of the order of 50cusecs, so like Waltham we entered by a nearby collapse doline behind dry rice paddies. Did not see the five inch spiders reported by Waltham. The cave is about 1500m long and there is a most impressive view up the canyon from near the base of the entrance waterfall pitch.

Several photographs were taken. We emerged to find the doline still lined on all sides by curious locals. The fall at the entrance of the cave is referred to in some sources as Devin Falls after one Miss Devin who was allegedly swept over whilst taking a 'romantic bathing' in a pool just upstream. During the monsoon the river apparently fills the cave.

Regrettably we had no time to confirm Walthams statements that there must be many kilimetres of cave wating to be discovered under Pokhara Valley. However we agree with his assessment of the potential, all the streams crossing the valley which we saw clearly from the air, either vanished at some point or other, or ran through very deep narrow gorges.

PRELIMINARY REPORT ON MAHENDRA CAVE, BALICH AUR VILLAGE, POKHARA VALLEY, KINGDOM OF NEPAL 16DEC75

Present: J. Dunkley, A. Povey + innumerable local 7 year old 'guides'.

This cave has not been reported in the literature before, and was missed by Waltham even though marked on a few more recent maps. A comprehensive description and survey will be published in the 'ASF Newslotter' shortly.

It is located near Balichaur village about 5-6 miles north of Pokhara Airport at the foot of a big hill. It is (almost) and abandoned stream cave about 150m long, well known locally even having entrance steps and a formed path within. It is heavily vandalised by the Nepalese 'Fred Nork was here' inscriptions. Prospect for further exploration, particularly beyond the terminall rockfall, were examined but appear to be nil.

Next day we left on a 12 day walk to the ANNAPURNA SANCTUARY.

CHOVER GORGE, VALLEY OF KATMANDU. 13 DEC 75

Present: J Dunkley, L. Povey.

We cycled out to Chovar Gorge the afternoon of my arrival from Bangkok. The Gorge is located where the Bagmati River, carrying the entire drainage of the valley of Katmandu, breaches a limestone barrier. Obviously there was once a big cave and legend has it that when the valley was a big lake (confirmed as being the cave during the Pleistocene) the Goddess Manjushree cut cut through the barrier to let the water out and make the valley inhabitable. We noted several shallow dolines, some used as a local toilet, and several cave entrances. The largest entrance was inaccessibly located on the far side of the gorge and looked most impressive and promising. We did not have time of equipment to get to it - a climbing rope would be needed.

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CAVCONACT 76

THE ELEVENTH BIENNIAL CONVENTION OF THE AUSTRALIAN SPELEOLOGICAL FEDERATION.

Time: Monday December 27 - to Friday December 31, 1976.

Place: The Australian National University, Canberra, Australia.

Host Clubs: National University Caving Club and the Canberra Speleological Soc.

Program:	Morning	Afternoon	Evening
Monday(27)	Registration and Committee Meeting 1	Official Opening and sessions	Social Gathering.
Tuesday(28)	Sessions	Sessions	Photo competition and exhibition
Wednesday(29)	Sessions	Sessions	Caveman's Dinner.
Thursday(30)	Sessions	Speleosports	Field Trip Organisation
Friday(31)	Committee Meeting 11 and start of field trips.		

CALL FOR PAPERS.

The Organising Committee is now calling for papers to be presented at CAVCONACT They plan a total of 6 sessions and if response is great enough, they will run concurrent session by matching a 'scientific' session and a 'general' session. Topics of papers should be cave or karst related. General fields suggested include geology geomorphology, conservation, biology, anthropology/archaeology techniques, photography and cave reports. Notification of titles of proposed papers should be submitted by 31 May 1976 and abstracts will be printed before the convention and should be submitted no later than 30 September 1976.
Further information is available from the Organising Committee, Cavconact-76 C/- 18 Arabana Street, Aranda. A.C.T. 2614.

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